THE OCHRE COLOURED POTTERY CULTURE: A CONSIDERATION OF THE EVIDENCE

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By

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TO WHOM IT MAY CONCERN

This is to certify that the M.Phil. Dissertation entitled **"The Ochre Coloured Pottery Culture: A Consideration of the Evidence"** submitted by **Mr. Salim Ansari** has been completed under my supervision. To the best of my knowledge this work is his original work and is suitable for submission for the award of M. Phil in History.

(Dr. Jaya Menon)
Supervisor

CONTENTS

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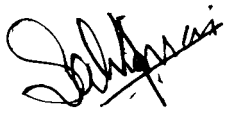
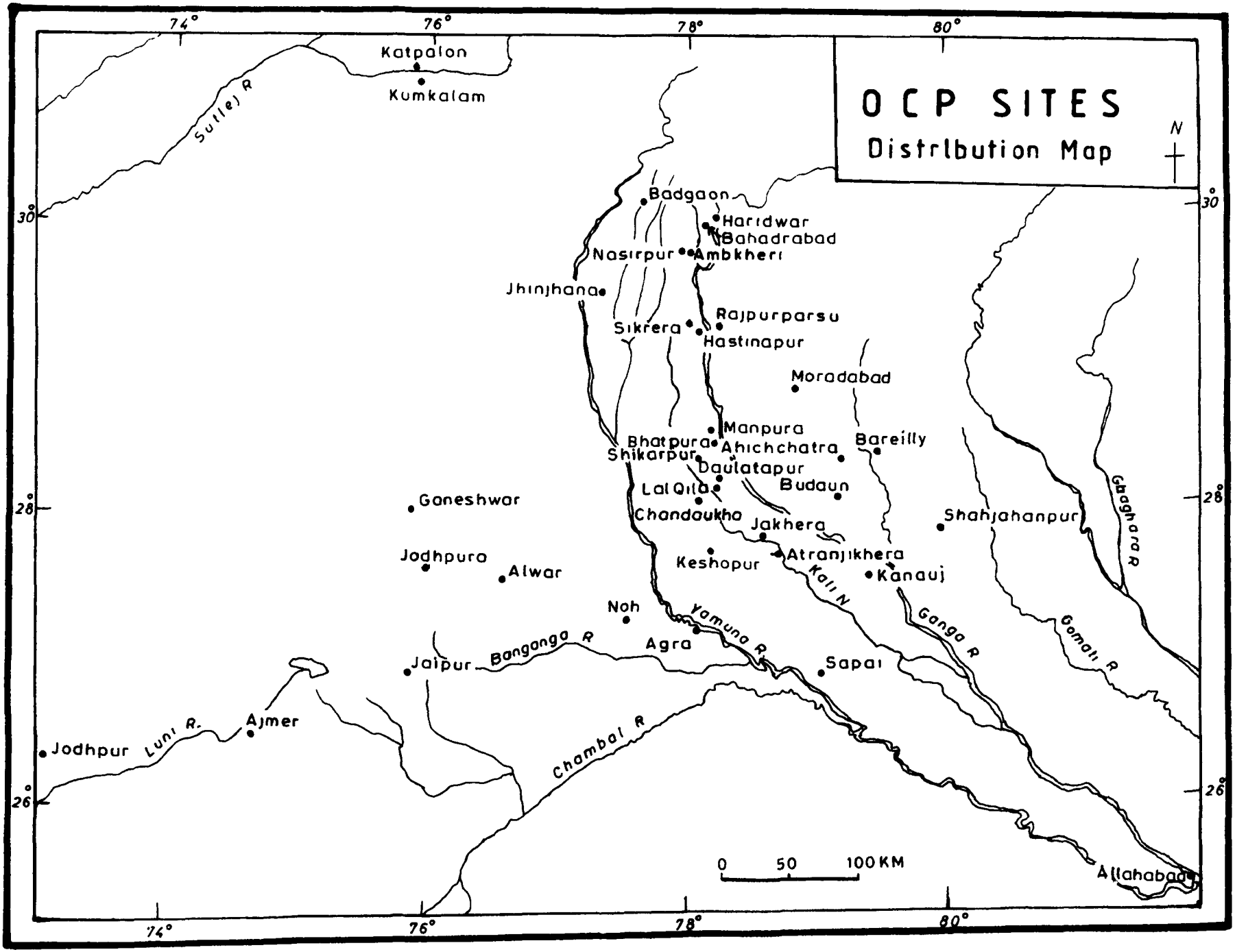


(Salim Ansari)

LIST OF ABBREVIATIONS

IAR	INDIAN ARCHAEOLOGY- A REVIEW
AI	ANCIENT INDIA
OCP	OCHRE COLOURED POTTERY
BRW	BLACK AND RED WARE
PGW	PAINTED GREW WARE
NBPW	NORTH BLACK POLISHED WARE
S-K	SUNGA-KUSHANA
DSW	DEGENERATE SISWAL WARE


OCP SITES
Distribution Map
N
74°
76°
78°
80°
30°
28°
26°
Katpalon
Kumkalam
Sutlej R
Badgaon
Haridwar
Bahadrabad
Nasirpur
Ambkheri
Jhinjhana
Sikrera
Rajpurparsu
Hastinapur
Moradabad
Manpura
Bhatpura
Ahichchatra
Bareilly
Shikarpur
Daulatapur
Lal Qila
Budaun
Ganeshwar
Chandaukho
Jakhera
Shahjahanpur
Jodhpuro
Alwar
Keshopur
Atranjikhera
Kanauj
Kali N
Ganga R
Ghaghara R
Gomati R
Noh
Yamuna R
Agra
Jaipur
Bangonga R
Sapai
Jodhpur
Luni R.
Ajmer
Chambal R
0 50 100 KM
Allahabad

ILLUSTRATIONS

MAP

TABLES

PLATES

FIGURES (POTTERY)

INTRODUCTION

The term "Ochre Coloured Pottery Culture" (henceforth called OCP) was coined by B.B.Lal after he excavated the site Hastinapur in the year 1951-52. This culture was seem to be concentrated in the Ganga-Yamuna Doab regions of Uttar Pradesh. But recently its presence sought in other States as well such as Haryana, Rajasthan, and Punjab. Apart from these above mentioned regions it seems to have been traced in mid-Ganga regions also. However, regarding its authorship and identification any decisive consensus has not yet been reached.

The objective of the study is to delineate the polemical issues regarding this culture. This study revolves around three prominent problems. Should we consider sites such as Lal Qila and Atranjikhera as belonging to the same archaeological culture? Or do these sites differ in terms of archaeological assemblages? Some of the scholars propounded that there is no uniformity among OCP sites that these OCP assemblages varied regionally. For example, the assemblages of Bahadarabad was different from that of Atranjikhera. Scholars again maintained that the OCP archaeological assemblages of the upper Ganga-Yamuna Doab are different from those of the central Ganga-Yamuna Doab or western Uttar Pradesh such as Lal Qila, Atranjikhera, Daulatpur, Saipai etc.

Therefore, Lal Qila and Atranjikhera have been chosen in this study to investigate whether their material assemblages are the same or differ. The other reason behind selecting these two sites is because both these sites were

investigated by the same excavator R.C. Gaur and thus a similar typological classification of pottery and artifacts would have been used. It was also helpful that for these two sites we have complete excavation reports that help us with the comparison.

The second problem dealt with in this dissertation is whether any affiliation can be traced between OCP and other cultures i.e. Pre-Harappan and Late Harappan. Similarly can we consider OCP as an independent or indigenous culture? Scholars came up with various points of contention. Some scholars tried to relate this culture with Pre-Harappan while others tried to justify an affinity with the Late Harappan. In order to make their hypothesis strong they came up with certain concrete evidence. Another group of scholars favoured not changing the existing nomenclature, but instead of writing OCP in capital letters write it in small letters and in bracket to mention the provenances from where the assemblages were recovered i.e. ochre coloured pottery (Bahadarabad), ochre coloured pottery (Atranjikhera) and so forth.

Yet another problem that can be marked is of the Copper Hoards. The nuclear region of the Copper Hoards coincides with that of OCP. Some typical Copper Hoard implements of western Uttar Pradesh were recovered in accidental circumstances from exactly the same site which later revealed OCP potsherds. The suggestion thus, was that there may have been some intrinsic relationship between them.

In order to identify a culture, David Clark found it useful to see site assemblages as associated sets of contemporary artifact types, and in turn, to locate these assemblages as occurring together in definite contemporary association with one another over specific and defined geographical areas and periods of time. Following Clark therefore, in this dissertation the sites of Lal Qila and Atranjikhera were selected to investigate whether both can be considered as part and parcel of the same culture or not. The study explores certain strategies in order to determine the nature of the assemblages and hence, if a culture can be identified.

In order to investigate the above mentioned problems, the dissertation comprised of four chapters. The first chapter deals with the historiography of the OCP culture. In this I tried to focus on the opinions suggested by archaeologists and scholars regarding its nomenclature and identification. Different scholars suggested various views. Some scholars tried to affiliate this culture with the Pre-Harappans or Sothi-Siswal or Ganeshwara-Jodhpura culture while others related it with the Late Harappan or Degenerate Harappans. Other scholars more willing to retain the existing OCP nomenclature but with a reference to provenance. Thus OCP was written in small letters i.e., 'ochre coloured pottery' with the provenance written in brackets.

The second chapter deals with the OCP sites and their geography. In this chapter I attempt to assimilate those sites from where OCP type ceramics have been recovered. The Sites, as well as the nature of their depositions, their climatic

conditions, natural vegetation and their excavators have been mentioned. Another aim was also to investigate whether OCP occurred as a single culture deposition or occurred with more than two cultures i.e. multicultural depositions. OCP sites have sometimes been seen as with Harappan influences and on the other hand certain Harappan sites are suggested to have been influenced by the OCP using people. This chapter further deals with the fact that OCP sites very often have been found along with elements of another culture i.e. of the Copper Hoards. I tried to sketch out the OCP along with clustering of sites. To make this chapter easier to understand a table of sites has been provided.

In the third chapter dealing with pottery analysis, the study aimed to investigate similarity and dissimilarity of pottery types between OCP sites and other cultures. Certain sites have already been declared OCP sites like Lal Qila, Atranjikhera, Daulatpur, Hastinapur, Keshavpur, Chandaukha etc. Among these sites the ceramics from Lal Qila and Atranjikhera were analyzed to ascertain the degree of similarity between them. Pottery comparison is one of the strategies to reach the core of the investigation. This dissertation focused on ceramic morphology rather than fabric analysis. After examining types and forms of ceramics between OCP sites, the next step was to compare OCP types with those from Late Harappan sites such as Mitathal IIB and Bhagwanpura IA. The reason to do so was due to the fact that scholars have tried to link the OCP with the Late Harappan. The study further examined how many pottery types were found in

OCP and Late Harappan sites and among the types how many showed resemblances and dissimilarities.

In the fourth and the last chapter, the study highlighted the importance of artifacts in constructing a "culture". Pottery and artifacts together comprise assemblages. In order to identify a particular "culture" based on material remains and to ascertain whether it has affinity with other contemporary or earlier or late cultures, it was necessary to study details of artefactual remains which included pottery and artefacts. All too often, archaeologists have focused only on pottery to identify "culture". This chapter will study the artifacts found from OCP sites of Lal Qila, Atranjikhera and Daulatpur and on the basis of comparison ascertain whether a "culture" can be identified.

The exercise of comparing OCP artifacts with those from Late Harappan sites such as Mitathal IIB and Bhagwanpura IA was also done to see the degree of influence. It is considered important to be able to see differences in artifact typology' raw material procurement and consumption, evidence of production and so forth. Presence or absence of certain raw materials or knowledge or not of certain technologies can suggest strong influences or otherwise. In the final analysis, the attribution of an 'archaeological culture" and tracing of influences from other "cultures" needs rigorous comparison and study of both pottery and artifacts.

CHAPTER I

A History of the Ochre Coloured Pottery (OCP) Problem

Explorations and subsequent excavations in Northern India brought to light important culture that has been variously labelled as 'Ochre Coloured Pottery' and 'Copper Hoards'. Ochre Coloured Pottery (henceforth OCP) has been designated as a culture named after a particular ceramic found by B.B. Lal in 1951-52. It is believed that the upper region of the Ganga-Yamuna Doab was first colonized by the people of this OCP culture. This mentioned region was climatically drier and more arid in comparision to the Middle and Lower Ganga plains.

About its nature and authorship, there are many controversies, and there has been little concordance on the issue. However, in terms of its expansion, most areas have been covered by archaeologists. The northern most region of the OCP has been suggested as Bahadarabad near Hardwar in Uttarakhand while the southern most extension region is till Bharatpur in Rajasthan. Katpalaon near Jullandhar in Punjab and Ahichchhatra near Bareilly in Western Uttar Pradesh are the western and eastern limits respectively.

About the authorship or the nature of the material, mainly three claims have been put forward regarding the archaeological evidence that is comprised:

1. The refugee or Late Harappan (Ghosh, 1964)
2. An indigenous people (Lal, 1951; Dikhshit, 1979)
3. Pre- Harappans (R.C Gaur, 1987; M.D.N Sahi, 2006)

It is necessary to look at the history of the discovery of this pottery. The accidental discovery of five valuable copper implements from Bisauli (Badaun) had led archaeologists under the supervision of B.B.Lal to excavate the spot. The recovered materials from the two trenches A and B were classified into two categories (Lal, 1951)

1. Well-fired red slipped ware with designs executed in black colour.
2. Ill-fired, thick ochre washed ware with worn out edges.

Similarly at Rajpurparsu (Bisauli) investigations were carried out to check whether the ochreous ware as appeared at Bisauli was present at this site too. Again, the lowest levels produced the same kind of ill-fired, thick ochre washed, rolled pottery. Both the sites were claimed to be Copper Hoard sites.

At the multicultural site of Hastinapur in Uttar Pradesh, excavations were conducted by B.B. Lal in 1954-55. The lowermost layer once again produced potsherds and partially broken pots which appeared worn out and rolled with a wash of ochre, the colour of which ranged from orange red to deep red. The wash also had a tendency to rub off easily. Potteries from the lowermost layer were too badly damaged to ascertain their shapes or forms (Lal, 1954-55). According to Sankalia (1964 cf. B.B. Lal 1954-55) the condition of the ceramics was possibly due to waterlogging in particular areas.

Alamgirpur, excavated by Y.D. Sharma has been considered as the easternmost Harappan site. Although the basic facets of the Harappan Civilization are absent, some of the forms and shapes, design and decoration led Sharma to

affirm its affinity with the Harappans. Some characteristic OCP types seemed to occur in Harappan fabric along with the typical Harappan forms like the Indus goblet, the cylindrical beaker, the perforated jars etc. To Y.D. Sharma (1958-59) this site marked the beginning of the OCP.

Bahadarabad in western U.P from where some copper tools have been collected was also excavated by Y.D. Sharma. The excavator failed to establish a direct link between the OCP and the copper tools; the copper tools were recovered from an earlier layer than the OCP. Moreover, Sharma encountered some sherds having a sort of degenerated Harappan form. Although a number of copper tools as primary artifacts of the Copper Hoards have been explored but stratigraphically these have not been found along with OCP sherds. Hence, a definite link was not established between the hoards and the pottery. OCP was thought to be a relic of refugee or degenerate phase of Harappans pottery (Sharma 1971-72: 39)

Some of the sites in western Uttar Pradesh or in the Doab influenced by the Harappan ceramic complex were examined by Deshpande. He also excavated at Ambakheri and Bargaon. The excavations revealed a single culture occupation yielding the OCP at Ambakhari in District Saharanpur in U.P. No copper objects were found in this excavated stratum. The recovered OCP sherds seemed to have been inadequately fired and showed complete lack of slip. According to Deshpande (1963-64) laboratory tests confirmed that the pottery was ill fired and that the slip was not a homogeneous part of the fabric. The OCP from Ambakheri while sharing the fabric of the corresponding pottery from Atranjikhera and

Bahadarabad differs from it in form. On the other hand Deshpande found that the assemblages showed certain affinities with Harappan material of Alamgirpur, Bara, Bargaon and Ropar.

The excavation at Bargaon revealed a 1 m thick occupational deposit yielding the Harappan ware along with the unslipped OCP as at Ambakheri, but here some of the pottery was also painted. Other noteworthy finds which confirmed the association with Harappan ware were copper rings, chert blades, weights, and bull-headed terracotta toycarts and faience bangles. No structures were encountered in the excavation (Deshpande 1963-64). Deshpande (1963-64) argued that the Ambakheri and Bargaon pottery on the basis of typology may be indirectly related to Harappan Ware. However, other sites like Atranjikhera had no connection with the OCP of Ambakheri and Bargaon.

According to S.R. Rao (1969 cf. B.P Sinha 1969) only 50% of OCP elements are related with the Harappan and remaining are less Harappan. Paintings on them have almost disappeared probably due to flood and waterlogging. The OCP sites are considered to be the temporary Harappan settlements as in the case of Saurashtra, where the Harappans in the late phase made smaller temporary settlements. Indirectly, thus Rao seems to favour a late Harappan affiliation of OCP.

According to Krishna Deva (1969: 78, 82) among the single culture sites so far excavated, Ambakheri in Saharanpur District is noteworthy. The short but informative accounts of the excavation showed that although the Harappan pottery

as such was absent, the derivative Harappan shapes like the short-stemmed dish-on-stand and the remaining pottery types and design (with the exception of the incised design) from Bargaon were all present, together with some elements of the familiar Harappan equipment such as figurines including a humped bull, toy cart wheel and cakes of terracotta. A fine de-luxe flask with a long neck, oval body and flat base from Ambakheri closely resembles a Harappan type from Cemetery R.37, but the fabric is much thinner. Significantly all the Alamgirpur's types except some were available at Ambakheri in the typical Ochre Coloured Ware. Bargaon, an OCP site not only proved its association with the Harappan but also with the Copper Hoard. It is infact, revealed that Ambakheri has marginal OCP affinity, but even then that exact nature of the OCP is yet to be determined. Only a few Copper objects have been analyzed and probably the mines of Rajasthan and Singhbhum were used for copper. The Copper Hoards from Bihar should also be checked with its ceramic nature. Krishna Deva referred to a time bracket given by Wheeler i.e. 1700-1000 B.C and he termed it as Degenerated Harappans not to be assumed as Harappan Culture.

The other sites showing the presence of the OCP pottery like Hastinapur, Rajpurparsu and Bisauli were claimed not to show any Harappan influences. The evidence from Atranjikhera indicates the presence of painted designs on the OCP sherds, but this site does not appear to belong to Harappan group. Thus, to B.B Lal (1969: 88) it is reasonable to conclude that the OCP formed part of a cultural trait of Late Harappan.

Before one studies the affinity of OCP to other archaeological cultures of the Indian sub-continent, it is important to reflect as to how far OCP can be related to another culture attributed to north India i.e. the Copper Hoards. It has already been mentioned that copper implements or tools were recovered from a hoard from Bisauli and Rajpurparsu. But these sites were devoid of any ceramics. Archaeologists from the first discovery of Copper Hoards have been trying to link them with the OCP, but stratigraphically it was not possible until a very important discovery happened in the year 1971-72.

From Saipai in Etawah District of Uttar Pradesh, a hoard of copper objects with hooked sword, anthropomorphic figures, bangles, bar celts and harpoons were reported. L.M. Wahal undertook an exploratory excavation at the findspot of the hoard. He obtained a sword, typically representative of the Hoard in stratigraphic association with OCP.

Wahal was further deputed to inspect the area to verify the authenticity of the findings. A trial trench was laid out very close to the find spot in order to find out if there were any other remains in the field. During the course of the trial dig, besides pottery, a hooked spearhead was also found. Again, a harpoon was found at a depth of 45 cm. The recovered potsherds left an ochreous colour much as the Hastinapur, Bisauli and Rajpurparsu fragments. In one case, a painted design with criss-cross lines in black pigments was found in red ware. The pottery did not show any resemblance with the Harappans. It appeared then that the missing link between the typical Copper Hoard tools and OCP was found. Since the association

of Copper Hoard tools and OCP was suggested, Wahal (1971-72) recommended that instead of calling the culture OCP, it may be called 'Copper Hoard culture'.

Nigam (1971-72: 12) does not agree with the present nomenclature of the OCP. He suggested that it would be more appropriate if the existing nomenclature was changed. Thus, he classified the entire evidence from the different OCP sites into four groups. In the first group he placed sites like Ambakheri, Hastinapur, and Noh where no copper implements or artifacts encountered along with OCP. In the second group he placed the sites, which yielded copper tools along with OCP i.e., Bahadarabad, Bargaon, and Saipai. In the third group were areas from where only copper hoard tools were found but without any traces of red ware or OCP i.e. Bihar, Karnataka, West Bengal, Orrisa etc. And in the last group were sites where copper artifacts were found without any stratigraphical associations with any culture. Thus, for Nigam rather than giving a common term OCP to such different sites, it would be more appropriate to use site specific terminologies, such as Bahadarabad ware, Atranjikhera ware and so forth.

Joshi (1971-72: 13) felt that one should be more cautious regarding the correlating of OCP with copper tools in Western U.P. Excavations so far concluded at the findspots of copper hoards reflected a poor economy and low standard of living. He questioned: how was it possible that a people who prepared such advanced and sophisticated tools of copper hoards, had such an ordinary culture? Therefore, he felt that either the copper tools had no connection with OCP or they might have belonged to an earlier copper- Bronze Age culture.

Misra (1971: 354-355) conceded the gradual modifications of the evidence of Harappan pottery in the Ganga-Yamuna Doab. However he felt that the picture could be understood only by undertaking a typological study of the Harappan, Ropar and Bara materials. To V.D. Misra the circumstantial evidence of the OCP suggests a culture closer to the Late Harappan category. He pointed out evidence to vindicate his statement. At Ambakheri in Saharanpur District, though typical Harappan shapes are absent there are, however derived forms such as short-stemmed dish- on- stands which were encountered. The majority of the Ambakheri pottery types in the OCP can be traced back to the Late Harappan assemblages of Alamgirpur. The geographical situation of Alamgirpur in Meerut District of Western Uttar Pradesh also suggests that it would have absorbed Harappan influences earlier than the sites lying further to the east. Moreover, Bara was compared with the OCP ceramic complex of the Ganga-Yamuna Doab. Dikshit (1968a cf. Misra 1971) found resemblances between Bara pottery and the OCP like vase with splayed out rim, dish-on-stand with drooping rim, basin, hollow lid with central knob and large storage jars with rusticated surface. Misra correlated the OCP pottery with the Late Harappan ware of Ropar, Bara, Alamgirpur and Bargaon etc., on the basis of types such as dish-on-stand, lid with central knob and cord impressed designs.

Misra (1971: 357) also suggested that the four types of the Copper Hoard was claimed to have been found in the Late Harappan context:1) a copper ring type of Late Harappan Bargaon, has been found from Pondi and Bahadarabad; 2) a

broken anthropomorph has been found in excavation from the upper most deposit of Lothal IV; 3) the flat celts of the copper-hoards and Harappan culture are alike; and 4) a harpoon with broken blade and a ring were found at Mitathal IIB at a depth of 0.30 m. from the surface, presumably in a Late Harappan context.

Gupta (1971-72) disagreed with the opinions associating OCP with Harappans. He reiterated that if the Copper Hoard tools and the Harappans have nothing in common then how could the pottery be associated with them? On analysis, Gupta made four points:

1. The Copper Hoard people were the late contemporaries to the Harappan.

2. The OCP people came in contact with the Harappan in the Doab.

3. The OCP has a separate entity.

4. The epicenter of the OCP lies between Etah and Kanpur although its origin seems to lie somewhere between Etawah and Kanpur.

He also did not agree to call the OCP as Pre- Harappan. Neither did he consider it as totally Post- Harappan, since at one stage, probably between 1800 B.C and 1600 B.C, it overlapped with the Harappan pottery. At the same time, he was not ready to date the Copper Hoards prior to 2000 B.C.

Suraj Bhan (1971-72, 1975) who excavated both Siswal and Mitathal mentioned that these sites played an important role in understanding the OCP. He divided the Siswal ceramic traditions into two phases A and B, in which phase A is characterized by typical Kalibangan fabrics, use of white pigment in addition to black or red surface, while phase B was characterized by a sturdier pottery evolved

from early Siswal traditions. It is painted in black monochrome and has a paucity of shapes and designs. Likewise, he divided Mitathal into two periods: I and II. Period II was further sub-divided into two phases.

Period I was characterized by a Late Siswal i.e. Siswal B or Late Kalibangan Ware although all the six fabrics of Kalibangan are represented but more common are A and C fabrics of Kalibangan. Period IIA is characterized by the appearance of Harappan culture comprised of typical Harappan Ware as dish-on-stand, beaker, perforated jar, tall vase etc. Period IIB is marked by a gradual decline in the ceramic traditions of the previous period. The classical Harappan shapes like the dish-on-stand, beaker, perforated jar, and dish with nail-headed rim and so forth became less popular. These shapes were replaced by a squattish and sturdy dish-on-stand with hooked rim and drooping rim.

Suraj Bhan concludes that the Bargaon ceramic industry and the OCP of Group A (surviving Harappan, Cemetery-H and Non Harappan & Non Cemetery-H as at Ambakheri) evolved from the fusion of the Harappan and the Kalibangan Pre- Harappan or Siswal traditions. Thus the term signifies only a superfluous and perhaps an accidental aspect of the nature of pottery appearance. Since the cultural complexes of the Group A and B of the OCP are now best represented at Ambakheri and Atranjikhera respectively, he suggested that two groups be designated as Ambakheri (OCP) Ware and Atranjikhera (OCP) Ware.

For Y.D. Sharma, M.N. Despande, K.N. Sinha and A. Ghosh (1971-72) it would be better to use the term ochre coloured pottery in small letters with the

specific site being referred in brackets. Y.D. Sharma (1971-72) divided the entire ceramic complex into five groups based on the variation in evidence along with OCP sherds.

1. Harappa
2. Bahadarabad
3. Atranjikhera
4. Lal Qila
5. Saipai

K.N. Sinha reiterated Y.D. Sharma's suggestions. According to Sinha it would be better to mention the name of the site after the term OCP i.e., ocp (Atranjikhera) or ocp (Bahadarabad) etc. M.N. Deshpande (1971-72) recommended not changing the existing term OCP. But due to regional variations it would perhaps be better to retain the term OCP but add the site name when a site of particular region was being referred to i.e. ochre coloured pottery (Bahadarabad), ochre coloured pottery (Atranjikhera), and so forth.

R.C. Gaur (1973) felt that the view that the OCP was handiwork of the Harappan refugee may not be correct. Thus he clarified that a detailed study of the pottery types, forms and habitational pattern of the OCP and those of the Harappans showed that the material culture of the two people are different from each other and independent. The presence of a few Harappan types, shapes and fabrics at the sites of Ambakheri and Bargaon suggest that both the sites had some kind of trade link and flourished contemporarily at least for the same time as those

on the western border of U.P and both had borrowed something from each other. However, the sites which are further away from the border were almost free from the Harappan influences and their deposits bear local and indigenous features. as for example Lal Qila. The general feature usually noted about the OCP is that they had rolled edges, were porous with a powdery surface, ill-fired and thick. However, these attributes are rare at Lal Qila, due to the fact that the Lal Qila pottery came from undisturbed deposits, whereas the more degraded pottery came from disturbed contexts. Copper implements at other sites have been excavated from Mitathal IIB of Late Harappan context i.e. copper ring and a broken celt. This evidence to Gaur (1973) makes the OCP almost contemporaneous to Harappans, and the people in contact with each other. Harappan influences have been sought in OCP pottery recovered from the border area of western U.P and Punjab, while the sites further east in District Bulandshahr, Etah, Etawah, and their neighbourhood did not yield such shapes.

Gaur's study of the pottery from Lal Qila led him to associate them with Mitathal I or even to Kalibangan rather than Harappans. This led him to postulate that the OCP people might be related to the Pre-Harappan. Being driven away from their homeland by the Harappans in about 2300 B.C., it seems that OCP using communities migrated towards the east and independently established their settlements. After reconsidering the entire material evidence, he concluded that the OCP people most probably were the descendants of the Pre-Harappan.

According to R.C. Gaur, the entire red ware industries belonging to the period of OCP can be divided into the following:

1. Genuine OCP sites.

2. OCP sites with Harappan influence.

3. Harappan sites with OCP influence.

Gaur himself got the opportunity to handle the Bara pottery and found resemblances with the Lal Qila complex in some of the pottery forms, painted motifs, incised designs. He further got the opportunity to handle the pottery of Sothi which can be equated with Siswal A and in turn with Kalibangan I. But a careful study showed to him that the Sothi pottery had more affinity with the deposits of OCP in the Doab than that of Kalibangan I. Typical OCP sherds have also been found at Sothi in considerable numbers.

According to Agrawal (1981: 77) OCP was recovered from 2 m thick deposits from Jodhpura in District Jaipur, situated on the right bank of river Sabi, a tributary of Yamuna. There was indication of floods or water logging at the site. The upper level of OCP phase at Jodhpura gave two C-14 dates from samples analyzed by D.P Agrawal at the Physical Research Laboratory, Ahmedabad: 2230+ 180/ -180 and 2530+ 160/ -160. Thus, the OCP at Jodhpura falls in between 2500-2000 B.C. Thus, Jodhpura was stated to be Jodhpura Culture belonging to the Pre-Harappan period (Agrawal, D.P. cf. R.C. Agrawal, 1981: 77). Around the Jodhpura region about two dozen OCP sites were excavated along the bank of river Sabi. Likewise, Ganeshwara in District Sikar is considered as a single OCP

site and it is associated with Indus type of copper objects. The important copper artifacts encountered are arrowheads, knives, fishhooks, celts, chisels, bangles, ring, blades, and spearheads along with discovery of sixty flat and heavy copper celts measuring 20.32 cm to 25.4 cm in length. These copper artifacts are of pure copper. Moreover the discovery of hundreds of copper objects that were associated with OCP at Ganeshwara has added a new dimension to Indian archaeology. Further, Agrawal (1981: 80) says that the copper artifacts using OCP people were the original inhabitants of the copper-resources region, who were neither Harappan refugees nor wandering coppersmiths. Instead they seem to have exploited the copper mines for their own utilitarian purposes and for supplying finished artifacts to those living far from the copper resources.

To Gaur (1987) some Pre-Harappan sites like Siswal situated on the left bank of Chautang in Haryana, Sothi near sub-division of Nohar, Sarangpur in Chandigarh District, Balu in District Jind and Raja Sirkap near Faridabad have an affinity with the Lal Qila ceramics and other artifacts. To him the roots of these sites perhaps lay in Sarai Khola, situated about 2.5 km south-west of Bhir mound in Taxila in Pakistan. Gaur suggested that probably the Pre- Harappans entered the eastern region via Harappa and Ropar and subsequently at the mentioned sites flourished along with the Harappans or even earlier to the Harappans.

According to Gaur, a careful study shows that the OCP deposit is nothing but an extension of the Pre-Harappan culture found in Pakistan. Pre-Harappan motifs like bull, snakes, and goats are all found in the ceramic complex of Lal

Qila. Gaur concluded that the Pre- Harappans and the OCP people seem to be the early Aryans whose eastern settlements were extensively washed away sometime in the middle of the 2nd millennium B.C. by a great deluge.

Krishna Kumar (1997-98: 39-56) correlated the OCP with the Degenerate Siswal Ware (DSW) and thus divided the entire region into four zones and seven regions.

Zone A (I. Saraswati Valley, II. The Western Upper Ganga Valley, III. Central Upper Ganga Valley) Number of sites DSW / OCP number of sites (163); Copper Hoard sites (43).

Zone B (IV. The eastern upper Ganga Valley, V. The Mid Ganga valley, VI. The Lower Ganga Valley.

Zone C (VII. Chotanagpur Plateau, Orissa highlands) DSW/OCP number of sites (1); Copper Hoard (37).

Zone D (VIII. The Penninsula). DSD/OCP (0); Copper Hoard (10).

The DSW/OCP culture flourished mainly on the banks of perennial rivers namely Sutlej, Saraswati, Drishadvati, Yamuna, Ganga and their tributaries. To Krishna Kumar, the Copper Hoard and the OCP represent two facets of the same protohistoric culture complex, which tentatively proposed 'Copper Hoard-OCP culture' or the 'Rigvedic Aryan culture'. Thus Krishna Kumar was suggesting a Rigvedic origin for the OCP.

Vibha Tripathi (2002: 190) on the basis of Agrawal and Suraj Bhan's work has delineated two zones to the OCP, an eastern and western zone. Zone A

includes eastern Rajasthan, Haryana, Western Uttar Pradesh with sites like Jodhpura, Siswal, Mitathal, Bara, Ambakheri and Bargaon. These regions has strong Harappan influences with "Late Harappan and "Cemetery H" traits mixed with local features" Zone B is the area of mid and eastern Uttar Pradesh with sites like Lal Qila, Atranjikhera, Hastinapur, Saipai, Jakhera and Sringaverapura. These regions are largely devoid of Harappan and Cemetery H influences.These have been called a separate culture by Gaur.

Thermoluminiscence Dates (TL) were obtained for OCP sherds among which, three dates fall between 2630 and 2030 B.C and five between 1780 and 1180 B.C. These dates have been obtained from the sites Atranjikhera, Lal Qila, Nasirpur and Jhinjhana. Thus on the basis of dates the culture according to Vibha Tripathi (2002) appears to be a late contemporary of the Indus Valley Civilization and continued up to the Late Harappan Culture of the Punjab- Haryana regions.

According to M.D.N. Sahi (2006-07) what earlier may have been reported about the OCP pottery having a powdery surface which peeled off when touched is not universally true. He disagreed with the opinions of other archaeologists, who affiliated the OCP with Late Harappans. He made the following points:

1. In continuous process of evolution of culture from 7000-2000 B.C, was it confined only to the west of Yamuna and in the Mid- Ganga Valley? This would imply that the Upper Ganga Valley was barren land without any settlement and habitation till 2000 B.C.

2. Dates such as from Hulas (3000 B.C and 2400 B.C), Jhinjhana (2650 B.C). Atranjikhera (2280 B.C) and Lal Qila (2030) may lead us to believe that the sites existed earlier from the Late Harappan culture.

3. As regards the migration of Harappan as 'Degenerate Refugee' it is unreasonable to believe that they forgot the technique of making artifacts, or were they prohibited to make artifacts of Harappan type?

For Sahi (2006-07) how was it possible that this OCP culture would have evolved without any antecedents? How could the OCP have developed such an advanced copper technology? Sahi submitted that the material and agricultural prosperity are not commensurate with the Cemetery H or Late Harappan cultures. This makes the co-existence of these cultures doubtful. So, to him it is difficult to accept that the material prosperity of OCP people have any affinity with the handiwork of degenerate, decadent and deurbanized Harappan people. Therefore, OCP-Copper Hoard culture may not be accepted as a 'cousin culture' of the non-existant Late Harappan culture. Instead, Sahi tried to prove that the OCP and the Ganeshwara culture were the same and not two different entities.

He suggested that similar indentation marks are found on copper artifacts from Ganeshwara and OCP sites such as Bahadarabad, Pariar, Bithur and Haswa. Harpoon, swords, chisels and celts of the Gangetic type have been found at Malah (Bharatpur), Kota, Maholi, Chitwari (Jaipur) etc. The copper implements found from Bisauli have the same compositions and contain 97% of copper similar to the copper implements of Ganeshwara.

The OCP cultural deposits generally found over the natural soil means that at every site OCP artifacts were unearthed from the lowermost layer. To Sahi (2006-07) the ceramic assemblages of Ganeshwara were the same as those from Jodhpura on one hand and those from Atranjikhera and Lal Qila on the other. He also found resemblances of OCP ceramics, with that of Hakra Ware, reported from the Cholistan region and Jalilpur in Period I, both being Pre- Harappan. Mughal had reported from Jalilpur , pottery with the same external surface and rounded edges as if rolled by water action, mostly of pale red colour and soft texture as if under fired. The body was so soft that it could be peeled or rubbed off easily recalling the so called OCP. Sahi mentioned that Mughal himself observed the nature of pottery in stratigraphy that the pottery looks like OCP and was dated to the fourth millennium B.C. According to Mughal (1982) Hakra Ware and OCP do not have a painting tradition of applying white colours. Pottery bearing externally incised designs are common to both the wares. Paintings became richer with geometrical forms, floral and faunal motifs like humped bull, snake, and peacock etc.

Thus Scholars and archaeologists have tried their best to identify this culture ware first and then associate it with other prominent cultures like Pre-Harappan or Harappan and Late Harappan. On the other hand some archaeologists suggest that the evidence in the Doab may indicate a separate culture.

CHAPTER II

Ochre Coloured Pottery Sites And Their Geography

For any culture to evolve, develop and mature, their environments the settlement plays a vital role. People need to adjust themselves accordingly to the environment, they adapt themselves to living in such climatic conditions, natural vegetation and soil compositions. In this chapter an attempt has been made to investigate the nature of OCP sites. We are also interested in enquiry as to how many sites have only OCP deposits, how many have bicultural and multicultural deposits. How does OCP deposits of the Upper Ganga-Yamuna Doab differ from the Central Ganga-Yamuna Doab? The study also tried, to investigate the clusters of OCP sites. OCP assemblages have also been seen in some cases with Copper Hoard implements and also with Late Harappan influences or vice-versa. Important OCP sites are mentioned with brief introduction such as their locations including latitude and longitude, their excavator and the year of excavation as well as important findings.

1. Abhaipur, Pilibhit (28° 18' N; 79° 45'E)

This site is situated about 1.5 km east of river Deoha and around 35 km east of Bareilly city on the road to Bilaspur. It is a multicultural habitational site with occupation ranging from OCP, BRW, PGW, and NBPW. Just above the natural soil, a thin homogeneous layer containing fragments of OCP was considered to be the earlier habitational deposit. Among the pottery fragments a red slipped ware is

noteworthy, which however had no painted decoration. The ceramics were considered to be quite similar to that of Hastinapur (Misra, A. 2005-06: 76-84).

2. Ahichchhatra (28° 22'; 79° 07')

This is a multicultural site with deposits ranging from OCP to the medieval period. It is situated in Bareilly District near the river Ganga. Archaeological Survey of India under the supervision of K. N.Dikshit assisted by Ashoke Ghosh conducted on extensive excavation at the site in 1940-44. The site was again excavated by N.R.Banerjee in 1963-64.

Although it is known for PGW culture, its lower most deposition consists of OCP potsherds, which are unslipped of rolled and thick fabric followed by PGW, NBPW and Sunga-Kushana layers. Its natural vegetation is of tropical evergreen. Its climatic condition is humid sub-tropical. It receives annual rainfall between 100-200 mm, its soil composition is alluvial. (IAR 1964-65: 39; Ghosh 1989: 9).

3. Alwar

It is situated in Rajasthan, where exploration was carried out by R.P. Sharma assisted by Budhi Singh and D.D. Dogra. The exploration revealed protohistoric ware bear resemblances to OCP of Ganga-Yamuna doab. Its climatic condition, natural vegetation and soil composition are same as Noh (Bharatpur) (IAR 1980-81: 51-52).

4. Ambakheri (29° 44'; 77° 46') It is situated in the Roorki Tahsil of Saharanpur District on the bank of the river Solani, a tributary of Ganga. Mound II at

Ambakheri was excavated by M.N. Deshpande assisted by K.M. Dikshit, Shankar Nath, H.K. Narain and R.P. Sinha. Excavation at this site revealed a single cultural occupation which yielded OCP made of fine well-levigated clay and was wheel made. The clay was completely or partially mixed with sand and mica. Ambakheri is about 40 km S-E of Bargaon. Ambakheri has a humid sub-tropical climate. It has tropical deciduous forest and soil conditions are of alluvial (IAR 1963-64: 56; Ghosh 1989: 17-18).

5. Atranjikhera (27° 42'; 78° 44')

Atranjikhera is a multicultural site; its cultural sequences has been divided into four periods. Excavation at this site for the first time was conducted by R.C. Gaur of Aligarh Muslim University from Aligarh during 1962-63. Atranjikhera mound seems to be very large and elevated. The cultural sequence shows OCP as its lower most deposit followed by BRW, PGW, NBPW, Post- NBPW and the last uppermost layer revealed Pre- Mughal Glazed Ware. It has the climatic condition of tropical wet and dry. It has natural vegetation of tropical deciduous. It has alluvial type of soil. (Gaur 1983; IAR 1962-63: 70).

6. Bahadarabad (29° 55'; 78° 02')

This site is situated in Saharanpur District about 20 km north of Ambakheri. This site is near the river Solani, a tributary of the river Ganga. Y.D. Sharma excavated the site in 1958-59. He, however, failed to associate the copper implements recovered from the site to the OCP layer. At this site dish-on-stand with short

stem, pedestalled bowl and basins indicate Harappan affiliation. (Sharma, Y.D 1971-72: 39; Ghosh 1989: 37-39)

7. Baheria (27° 30'; 78° 32')

Baheria is a site situated in Saharanpur District. Excavation at this site was conducted by V.D. Misra and B.B. Mirza of Department of Ancient History, Culture and Archaeology, Allahabad University. The site yielded two copper implements –a harpoon and a new type of sword along with few sherds of the OCP pottery. Its soil composition of alluvial type and its natural vegetation is of tropical evergreen. (Sharma, G.R 1971-72: 43; IAR 1966-67: 43-44; Ghosh 1989: 40).

8. Bargaon (30° 04'; 77° 34')

This site is situated 24 km north of Saharanpur on the left bank of the Maskara river, a tributary of Yamuna. Badgaon was excavated by M.N.Deshpande assisted by K.N. Dikshit and Shankar Nath. Excavations revealed a 1 m thick occupational deposit yielding Harappan ware along with unslipped OCP ware. It has same climatic condition, natural vegetation, soil composition as Ambakheri (IAR 1963-64: 56-57; Ghosh 1989: 54).

9. Bhatpura (28° 32'; 78° 03')

Bhatpura is another OCP site situated much near to Manpur, where exploration was conducted in 1960-61. It is in Bulandshahr District and has the tropical wet and dry climatic condition and natural vegetation is temperate (IAR 1960-61: 66).

10. Bithuna, Auraiya (U.P)

An accidental discovery revealed a hoard of typical copper implements like harpoon, anthropomorphs, flat axes, chisels, rings which were collected by N.S. Tyagi. The ceramic fragments scattered at the exact place from where these implements were collected were mainly represented by red ware dominated by well-baked potsherds or thick fabric. Their core is red or grey with some bearing a fine slip. A few sherds have appliqué of a rope pattern. Since no other ceramics have been found during explorations it is assumed to be single cultural site (Tyagi 2006-07: 266-70).

11. Bisauli (28° 22'; 79° 07')

This is the first site from where B.B.Lal during exploration in 1951 found copper tools along with potsherds in a surface survey. The recovered potteries were divided into 2 parts.

1. Well-fired red slipped painted red ware.

2. Ill-fired, thick ochreous washed ware, with worn out edges without showing definite shapes.

Bisauli is situated in Badaun District of Western Uttar Pradesh. Its climatic condition is of tropical wet and dry and its natural vegetation is of tropical evergreen receiving an annual rainfall of between 60-100 m (Dhavalikar 1997: 262).

12. Chandaukha (27° 5'; 78° 6')

This site is situated in Tehsil Koel of Aligarh District on the bank of Senegar. It is located on the Aligarh-Anupshahar road. It is a single culture OCP measuring 570 x 570 sq m. Excavation here was conducted by Abid and Ramjit of the Archaeological section attached to the Department of History, AMU, Aligarh in 1992. Its soil is alluvial and the natural vegetation is tropical deciduous. (Ramjit and Abid 2001-02: 155-58).

13. Dandia (27° 12'; 76° 76') Alwar & Sakatpura (Tonk) Rajasthan

Dandia is 2 km north of village in District Alwar. Another site with a copper hoard was found from Sakatpura village in District Tonk. Both the sites yielded copper implements like bar celts, flat celts, chisels, nail, copper bangles, rings etc. The copper implements here were typologically the same as compared with the copper implements of Ganeshwar-Jodhpura. Another resemblance with the Jodhpura-Ganeshwar are the indentation marks on tools (Dhaka 2005-06: 272)

14. Daulatpur (24° 14', 78° 11') site was excavated in 1984-85 by R.C. Gaur of Dept. of history, AMU, Aligarh. Tjhis site is situated at a distance of about 15km to site Lal Qila in Bulandshahr. It is located at the bank of Kalinadi, a tributary of Ganga. Gaur described it as a camp site for the OCP people most probably for Lal Qila. OCP sherds are found scattered all over the site. Its climatic condition, natural vegetation and soil composition is same as Lal Qila (Gaur 1995: 215-19)

15. Fatehpur Sikri

Excavation here was conducted by Shankar Nath assisted by C.P. Singh, Makrand Prasad, B.B. Suri, Y.K. Sharma and Chiranjil of the Agra circle of ASI. Period I of this site revealed the deposition of compact brown clay mixed with small kankar. The ceramic industry was represented by fragments of ochre coloured ware having coarse fabric, ill-fired with slip ranging from orange to dark orange in colour, which could be rubbed off easily. The entire deposition ranges from OCP to Mughal Period. (IAR 1988-89: 81).

16. Ganeshwara (37°40'; 75° 51')

The site of Ganeshwara is situated in Rajasthan. At this in 1977, a hoard of 60 flat copper celts was found. Subsequent explorations and excavations brought to light around five thousand copper objects in association with OCP sherds. The find was important, since the large hoard with a great number of typical copper artefacts were recovered stratigraphically along with a particular ceramic industry i.e. OCP. Thus this pottery formerly known as OCP was designated as Ganeshwar-Jodhpura ware by archaeologists. Its climatic condition is of tropical wet and dry. Its soil composition is alluvial and natural vegetation is of a tropical thorny type (Hooja 1995: 325-39).

17. Hastinapura (29° 9'; 78° 3')

It is a rich multi-cultural site situated in Meerut District of Western Uttar Pradesh near the bank of Hindon, a tributary of Ganga. The occupational deposition of the site ranges from OCP to the medieval period. This site was excavated by B.B. Lal

in the year 1954-55. For the first time OCP kind of sherds were recovered from an actual stratified layer. These sherds appear worn out, unslipped with a powdery surface and were recovered from the lowermost layer which had a thickness of 0.30 to 0.45 m. Unfortunately, it could not be ascertained whether they were wheel made. Some of the potsherds were slipped red but no definite form or shape could be figured out. Hastinapura has a semi-arid environment. Its natural vegetation is tropical deciduous and its soil composition is alluvial. (Ghosh 1989: 164; Lal 1954-55: 1-9).

18. Jaipur

Directorate of Archaeology and Museum, Govt. of Rajasthan led explorations at the capital city. OCP sherds were noticed at Bondhan Singha-ka-Tila and Bhankari on the bank of the river Sabi. The area has semi-arid climate with tropical thorny kind of natural vegetation and alluvial type of soil composition (IAR 1975-76: 77).

19. Jakhera (27° 48'; 78° 35')

Jakhera is a multicultural site situated in Etah District on the bank of river Kalinadi, a tributary of Ganga. Excavation here was conducted by M.D.N. Sahi of the Department of History, Aligarh Muslim University. Excavation brought to light potsherds of OCP recovered from the lowermost layer. OCP deposit was followed by levels containing PGW and NBPW. Its climatic condition is of tropical wet and dry, with tropical deciduous type and alluvial soil composition (IAR 1985-86: 78-79; Ghosh 1989: 180; Sahi 1994).

20. Jhinjhana (29° 30'; 77° 15')

This site is essentially a PGW cultural site, but some sherds of OCP ware were also collected by S.K. Rishi. It is situated in the Muzaffarnagar District (Uttar Pradesh) and is about 12 km from Shamli. It is located near the bank of the river Yamuna. Jhinjhana has tropical wet and dry climate. Its vegetation is of tropical deciduous and soil composition is alluvial (IAR 1962-63: 70; Ghosh 1989: 185).

21. Jodhpura

Jodhpura is situated on the left bank of the river Sabi. Excavations were carried out by the Department of Archaeology and Museums, Government of Rajasthan under the supervision of R.C. Agrawal assisted by Vijay Kumar in 1972-73. The lowermost strata or period I at this site comprised of OCP sherds. The recovered pottery is orange to deep red in colour and is wheel turned. It does not show rolled edges, a porous powdery surface and ill-firing as the OCP sherds from other sites like Hastinapura, Bisauli and Rajpurparsu. The deposition also does not show any traces of flood or waterlogging. Deposits with BRW, NBPW and Sunga-Kushana pottery were also found. In terms of cultural deposition, Jodhapura is the same as Ganeshwara. In and around the Ganeshwara- Jodhapur complex survey has been conducted which brought to light about two hundred OCP or other assemblages (Hooja 1995: 325-39).

22. Kamalpur & Mujahidpur

These two sites are situated in Hardoi District of Uttar Pradesh, where excavations were conducted by Dr.Arun Kumar of the Northern circle of the ASI. He noticed OCP sherds and a flat copper celt at both the sites. Both the sites have a sub-

tropical climate. The soil is alluvial and natural vegetation consists of tropical evergreen (Ghosh 1989: 198).

23. Kanauj

This site is situated in Farrukhabad District. Excavations were conducted under the supervision of Dr. Arun Kumar of the Northern circle of the Survey during which he encountered sherds of OCP. It has the same climatic condition, natural vegetation, soil composition as Kamalpur and Mujahidpur mentioned above (IAR 1978-79: 101).

24. Kaseri (28° 21'; 77° 15')

Kaseri is situated in Meerut District and is about 2 km north of Mohan Nagar on the right bank of the river Hindon. Excavations here were conducted by Dr. Romila Thapar of the Department of History of Delhi University and K.N. Dikshit of the National Museum in 1969-70. Excavations revealed six cultural periods in which period I was characterized by a few sherds of OCP followed by PGW, NBPW, Post-NBPW, Gupta period and Pre-Mughal Glazed Ware. Its climatic condition, natural vegetation and soil composition are the same as Hastinapura (IAR 1969-70: 43; Ghosh 1989: 209).

25. Katpalaon (31° 5'; 75° 52')

Katpalaon is situated 9 km from Phillaur on the right bank of river Sutlej in Punjab. Besides Harappan pottery some OCP sherds were recovered with rusticated surfaces and raised horizontal bands. The cultural deposition goes up to medieval period and comprised of PGW and Sunga-Kushana. Its climatic

condition is of tropical wet and dry. It has tropical deciduous kind of natural vegetation, and soil composition is alluvial (IAR 1963-64; Suraj Bhan 1975; Ghosh 1989: 210).

26. Keshavpur (27° 48'; 78° 07')

Keshopur is an OCP site situated in the Aligarh District. Excavation here was conducted by Abid and Ranajit of Archaeological Section, Aligarh Muslim University in 1991-92. The importance of this site is the discovery of brick-burnt platforms, intact water well and OCP pottery. Its climatic condition, natural vegetation, soil composition and temperature are the same as Chandaukha (Ramjit and Abid 2006-07: 226-35).

27. Kiratpur (28° 10'; 78° 10')

A Copper Hoard was discovered from Kiratpur (Bulandshahr), a village situated on the left bank of river Kalinadi, a tributary of Ganga. It was a chance discovery through which dozens of copper implements were collected like an anthropomorph, two celts, eight bangles, etc. A subsequent trial trench was laid down at the findspots which yielded OCP sherds. Its temperature, climatic condition and natural vegetation are same as Bhatpura (Gaur 1995: 184-188).

28. Kumkalam

It is located in Ludhiana District of Punjab. Devendra Handa of B.T.T College discovered an extensive mound which yielded Late Harappan pottery shapes along with OCP sherds. The entire deposition goes up to medieval period. This site was

rich in OCP. Its climatic condition, natural vegetation and soil composition are same as the Katpalaon (IAR 1976-76: 78).

29. Lal Qila (28° 10'; 78° 12')

Lal Qila is a single culture OCP site situated on the bank of the river Kalinadi. a tributary of Ganga in Bulandshahr District. Lal Qila is about 36 km away from Aligarh. Excavations here were conducted by R.C. Gaur of the Department of History, Aligarh Muslim University in between 1969-70 and 1970-71. This site provided a diverse artefactual assemblage. It also shows a regular OCP habitation evidenced by rammed floor and wedge-shaped bricks. The soil is alluvial in nature (Gaur 1995).

30. Manpura (28° 31'; 78° 01')

Manpura is a site situated in Bulandshahr District and is nearly 30-40 km away from the OCP site of Lal Qila. It is located on the bank of the river Kalinadi. a tributary of the Ganga. OCP from Manpura was reported by R.C. Sharma. Exploration in 1960-61 yielded potsherds of Late Harappan affinities identical with Bahadarabad pottery. Its climatic condition, natural vegetation and soil composition are the same as Lal Qila. (IAR 1960-61: 66; Lal 1954-55: 38A)

31. Mayapur (29° 56'; 78° 08')

It is a site where exploration was conducted by M.N. Deshpande, assisted by S.P. Jain and H.K. Narayan. Mayapur is situated in the Hardwar District near the river Ganga. During exploration the team encountered sherds of OCP and other wares. Its climatic condition reflects humid sub-tropical and has deciduous kind of

natural vegetation. Its soil composition is alluvial (Ghosh 1989: 287: IAR 1965-66)

32. Medh and Mallaha (Rajasthan)

Harpoons recovered from sites show an affiliation between these sites and the Gangetic basin implements (Dhaka 2005-06: 272).

33. Moradabad

At Moradabad exploration was conducted by R.C. Gaur of Aligarh Muslim University in 1975-76. Although the mound was traditionally associated with King Karna of the Mahabharat, even then the earliest habitation was estimated up to Christian era. But on the basis of the pottery an OCP deposits was suggested. It has alluvial type of soil. Its climatic condition is humid sub-tropical (IAR 1975-76: 56).

34. Nasirpur (29° 45'; 77° 51')

Nasirpur is a single culture OCP site situated in the Roorkee Tehsil of Saharanpur District and is about 12 km from Ambakheri. Some early historical culture deposits were also found. It is among one of the four sites from where OCP TL dates have been obtained, in which Nasirpur rendered a date ranges from 1500-1200 B.C. It has the same climatic condition, natural vegetation and soil composition as the other sites of Saharanpur District (IAR 1965-66; 1970-71; Ghosh 1989: 313).

35. Noh (27° 13'; 77° 30')

Noh is a rich site with deposit ranging from OCP, BRW, PGW, NBPW, Sunga-Kushana and Pre-Sultanate Period or Rajput Period. Noh is situated in Bharatpur District and is about 6.5 km west of Bharatpur on the Agra-Bharatpur road. Excavations here were conducted by the Department of Archaeology and Museums, Government of Rajasthan under the supervision of S.V. Kumar assisted by P.L. Chakravarty and B.M.S. Parmat. During the course of excavation the lowermost layer i.e. Period I represented by a 90 cm thick deposit of brownish clay, yielded OCP sherds. Noh has tropical wet and dry climate (IAR 1964-65: 34; Ghosh 1989: 318-19).

36. Rajpurparsu (29° 08'; 78° 09')

This site is situated in Bijnour District of Uttar Pradesh and is two km away from the present bed of river Ganga. It was the first site from where traces of the OCP was along with Copper Hoard implements were observed unstratified. B.B. Lal conducted an excavation in 1951, which produced ill-fired, thick ochre washed, rolled potteries from the lower most occupational stratum but no copper implements. Its climatic condition, natural vegetation and soil composition are more or less same as Hastinapura. Although there is no positive evidence that the Copper Hoard and the OCP pottery are products of the same culture, it is believed this may be likely (Ghosh 1989: 365; Lal 1951: 24-27).

37. Saipai (26° 27'; 78° 58')

Saipai is the Copper Hoard site from where celts, harpoons, spearheads, anthropomorphs and ring were recovered. Saipai is situated in Etawah District of

Uttar Pradesh. Excavations were conducted by L.M. Wahal of the Northern Circle of the Survey in 1971-72. During his exploratory excavation, he found a sword, typical of Copper Hoard implements. More important, stratigraphically at the same level, he recovered some OCP potsherds. The pottery has little in common with that of Bahadarabad and Ambakheri but has striking similarities in texture, shapes, technique and appearance with that of Hastinapura, Atranjikhera, Ahichchhatra and Lal Qila. Thus, for the first time he was able to show that the OCP and the Copper Hoards are part of the same assemblage. The climate is tropical wet and dry, and soil composition is alluvial with tropical deciduous vegetation (IAR 1969-70: 40; Ghosh 1989: 384).

38. Shikarpur (29° 23'; 77° 39')

Shikarpur is an OCP site situated in the district of Bulandshahr, on the bank of river Kalinadi, a tributary of Ganga. It is about 35 km away from the OCP site of Lal Qila. Its climatic condition, natural vegetation and soil composition are the same as of Lal Qila (IAR 1957-58; IAR 1963-64: Ghosh 1989: 407).

39. Sikrera (29° 18'; 77° 58')

Sikrera is a multi-cultural site situated in the District of Muzaffarnagar. The whole cultural deposit is divided into following periods (1) OCP (2) PGW (3) Grey Ware associated with NBW (4) Black Slipped Ware (5) Sunga-Kushana and (6) medieval period. Its climate, natural vegetation and soil composition is the same as of Jhinjhana, but it situated nearer to the river Ganga (Ghosh 1989: 409; IAR 1962 63).

Besides the above mentioned OCP sites in terms of their geography, many more sites have been explored largely, only the cultural sequence and occurrence of OCP has been established.

As seen in Chapter 1, OCP as a term given to an archaeological culture has been a bone of contention among scholars as to whether to designate it as a separate culture or one associated with other cultures such as Late Harappan or Pre-Harappan. In many cases copper implements occur along with OCP. However, these implements often do not occur along with OCP in definite stratified contexts. Prof. B.B. Lal for the first time associated Copper Hoard with OCP as a part and parcel of the same deposit, particularly after the excavation conducted by him at Bisauli and Rajpurparsu. B.B. Lal's speculation regarding associating OCP with Copper Hoards became even more possible after an excavation at Saipai was conducted by L.M. Wahal in 1971-72. This site produced evidence of a typical Copper Hoard i.e. hooked spearhead and harpoon which were unearthed from the same stratum from where sherds of OCP were found.

Observation for their occurrence for the first time marked at Bisauli and Rajpurparsu in 1951. Later on, subsequent excavations at Bargaon, Nasirpur, and Bahadarabad took place. Some scholars after examining copper implements categorized then broadly into two groups according to the regions in which they were found.

1. Jodhpura-Ganeshwara Copper Hoard

2. Ganga-Yamuna Doab Copper Hoard

The copper implements of Ganeshwara-Jodhpura are said to show differences with that of the Ganga-Yamuna doab. The Ganeshwar-Jodhpura copper implements comprised of celts, arrowheads, spearheads beads, bangles, fishhooks, rings, and balls. In contrast, the Ganga-Yamuna Doab copper hoards comprised of typical anthropomorphs, barbed harpoons, hooked sword, antennae sword, hooked spearheads, celts, rings etc.

Apart from these discrepancies, some concordances could be established between both regions. Some scholars believe that the genesis of OCP is sought to have been traced from Ganeshwara. The site of Ganeshwara yielded not only a hoard of copper implements from its Phase II but along with these implements were found a small number of potsherds. These potsherds were made of well-levigated fine clay were well-fired and sturdy with an ochre-coloured core. The pottery forms included narrow and wide mouthed cylindrical pot; and miniature bowl like form. Some of the pots bear incised designs like groups of straight or wavy lines, chevrons, and criss-cross markings. The copper implements recovered from this phase were limited which included five arrowheads, three fish hooks, one spearhead and one owl (Hooja, 1995).

As far as Copper Hoards are concerned, these are mostly chance discoveries and have mainly been found from the surface from where later trial excavations brought to light OCP sherds. OCP along with the Copper Hoard occur in the doab regions at the site of Rajpurparsu, Bisauli, Moradabad, Kiratpur, Saipai, Baheria, Madarpur, Bidhuna etc.

At the single culture site of Madarpur near Moradabad around 31 copper anthropomorphs have been reported and documented by V.N. Prabhakar. The site from where the anthropomorphs were recovered shows contemporary deposits of red ware or OCP pottery at the same exact location. Moreover, adjoining portions of the area were dug subsequently under the supervision of D.V. Sharma. These show regular layers containing OCP visible in exposed sections at the site. The OCP sherds were found scattered all around within the area approx. 100 x 75 m. The sediments show flood like activities over the OCP settlement at least on two or three occasions. Some of the pottery shapes of OCP and its associated coarse red ware that have been went mainly dish, bowl, basin, handi, vase, storage jar miniature pot, lota, lid, bowl with ring base and dish-on-stand (Sharma, D.V 2001-02).

Sanauli (29° 28'; 77° 01') is situated in Baghpat District in Western Uttar Pradesh and was excavated under the supervision of D.V. Sharma assisted by K.C. Nauriyal and V.N.Prabhakar in 2005-06. This site is extremely important not only for providing number of burials but is important is because it produced a number of antiquities such as copper sheath, stylized copper objects of 28 tiny paper-thin flattened and stylized objects, steatite inlay pieces, gold objects of star-shaped, ornaments made by spiraling of thin gold wire round two thick copper wires, gold cap like object and many semi-precious stones. But unfortunately, pottery with discernible shapes could not be unearthed from here. Thus until more evidence

comes to light from further excavations the author has labeled it as "Sanauli complex" or "Harappan-OCP combine complex" (Sharma, D.V. 2005-06).

OCP-Copper Hoard sites in terms of their deposition are ephemeral but are important. At Bithuna in Auriya District, some copper made implements in hoards have been discovered accidentally. Implements displayed typical Western Uttar Pradesh forms like harpoon, anthropomorphs, flat axes, etc. Trial trenching revealed red ware sherds some of which were finely slipped.

Earlier, it has been mentioned that the Copper Hoard implements from Rajasthan differ from those of the Ganga-Yamuna Doab region. However, both these regions show similarities in terms of ceramic fabric. Moreover, at Ganeshwar indentation marks such as star on their implements are similar to celts with star marks found from Copper Hoard sites of Western Uttar Pradesh such as Kiratpur in Bulandshahr District.

Thus on this basis some scholars believe that there could be a possibility of establishing a relation between OCP and Copper Hoards. Since then, scholars have tried to examine the nature of the findings of both OCP and Copper Hoards. There are some common striking similarities between the OCP and Copper Hoards.

1. Both the cultures are devoid of certain features of habitation like hearth, flooring, cemetery, charcoal, ash marks etc.
2. Both the cultures are densely concentrated in the Ganga-Yamuna Doab regions with typical copper implements like harpoon, hooked sword, antennae sword, anthropomorphs etc.

3. Occurrence of their material assemblages more or less at the same sites.

In the session of OCP and NBP in 1971-72, Y.D. Sharma on the basis of geography clearly demarcated OCP in two regions i.e. ocp (Bahadarabad) and ocp (Atranjikhera).

Some of the OCP sites of Upper Ganga-Yamuna Doab show strong influences with Late Harappan mainly because in this region are found Late Harappan sites such as Bara and Mitathal. Some of the OCP sites of Saharanpur District like Ambakheri, Bargaon, Bahadarabad also show affinities either with Harappan or Late Harappan or sites like Hulas.

Ambakheri has an over 1 m thick OCP deposit. The pottery has a slip which has a tendency to peel off. The forms include a large trough, knobbed lid (bowl-shaped), ring stand, basin, and vase with splayed rim. There was no Harappan pottery but Harappan influences were evident in such forms as short stemmed dish-on stand, a flask with oval profile, high neck and flat base, a toy cart wheel and terracotta cakes, carnelian bead bull figurines and stone objects. Besides a brick kiln and a hearth were also found (IAR 1963-64).

In the Gangetic Doab, Bargaon is considered to be a Late Harappan site due to the numerous Harappan forms unearthed like Indus goblet, ring stand, and miniature pedestalled cup. Important antiquities were a fragmentary copper celt and rings, chert blades, and weight pieces, a pot with animal headed handle having a perforation in the middle, terracotta and faience bangles, cart wheels with central hub and terracotta cakes round and oblong in shape. No evidence of structures

found. Alongside unslipped OCP was also recovered. The same was the case with Bahadarabad from where typical Harappan ceramics were found with OCP sherds (IAR 1963-64).

Katpalaon in Haryana has also been identified as an OCP site from where Harappan affiliated potteries have been recovered. Similarly, another site in Haryana, Kumkalam shows depositions of OCP along with Late Harappan Pottery (IAR 1976-77).

These sites in certain regions tend to lead us to believe that the OCP culture and Harappan or Late Harappan were more or less were affiliated or inter-related with each other in terms of imitating each other's fabric or shapes and designs.

Interestingly, two sites in Bulandshahr must be mentioned here i.e. Manpura and Bhatpura, where there is no scope of Harappan or Late Harappan influences. However, excavations unearthed OCP with Harappan affinities like dish-on-stand, pedestalled bowl, ring vase of jar, basin with flanged rim and other types which have close parallels with the pottery from Bahadarabad.

The feature of OCP comprising rolled or fragile potsherds is not uniform throughout its provenance. It is also quite clear that the concentration of this culture is not only the Ganga-Yamuna Doab. Some of the recent excavations suggest its prevalence beyond the Doab. Ceramic fabric of OCP has been found from Kurukshetra, Jind, and Ludhiana in Haryana. In Rajasthan it has been observed in Alwar, Tonk, Medha, and Mallahal. Such sherds have also been traced from Lucknow, Allahabad, Hardoi, Pariar and so forth.

Some sites show only OCP culture deposits and nothing else. These are Lal Qila, Daulatpur, Manpura, Bhatpura, Khanpur in Bulandshahr District; Alipura Bholani, Budhakhera, Jainpur, Mandla, Mandowala, Reri, Shaktal, Sikri and Tauli in Saharanpur District; Badal, Saket colony in Meerut District; Chandan, Sikarpur in Muzaffarnagar District; Helmana, Ramnagar, Karinkot in Alwar District; and Khambaltera in Kurukshetra.

Besides, these single culture OCP sites, some sites are multicultural in nature from where along with OCP other cultural materials have been recovered. Sites where OCP is found along with two or more cultural deposits are Hastinapur, Kaseri (Meerut); Atranjikhera, Jakhera (Etah); Badhaikalan, Sikrera, khanjahanpur, Kulheri, Pipalsa, Toda (Muzaffarnagar); Ahichchhatra (Bareilly); Kauriagarh, Morthal (Aligarh); Akrabas, Chandpur (Bulandshahar); Noh, Au (Bharatpur); Gulariya Sirsa Ther (Badaun); Dhansa (Delhi); Pariar (Unnao); Moradabad (Moradabad).

The sites of Saharanpur are unique. Here, OCP is found along with other cultural materials, either with Mature Harappan or PGW. Thus sites of Saharanpur are mostly bicultural in nature like Baundki, Bakaraka Mound, Bazipur, Chhajapur, Chilhera, Chunethi Sekh, Daudpur, Fatehpur Jat, Ghana Khandi, Kabirpur, Kailashpur, Khatauli, Krindhni, Matki Jharauli, Mohiuddinpur, Nirpalpur, Pinjaura, Salepur Bhokri, Sherpur and Tahirpur. Other bicultural sites in which OCP is a prominent culture with either Copper Hoard or PGW or Late Harappan are Deevlakhara, Bhatpura, Manpura, Kiratpur (Bulandshahar)

Jhinjhana, Kudana, Ladava, Mahmoodpur, Shamli Shamla (Muzaffarnagar) Sarola (Kurukshetra) Pahalwan (Jind) Malyali (Sikar) Kamalpur & Mujahidpur (Hardoi) Deoti (Lucknow) Amroha, Madarpur (Moradabad) Bidhuna (Auriya) Dandia (Alwar) Sakatpur (Tonk) Sanauli (Bhagpat).

The entire area of Aligarh- Bulandshahr is now being considered as a rich concentration OCP. Broadly speaking, some single OCP sites like Daulatpur, Bhatpur, Manpur, Sikarpur, Chandaukha, Keshavpur are lying not far away from the site Lal Qila. These sites are within a radius of about 50 km and appear to be cluster of OCP sites. The pottery complex recovered from those sites resembled with the pottery of Atranjikhera, Jodhpura I C, Bahadarabad, Ahichchhatra, Ambakhera, Saipai and Noh. Similarly (Khera, Tappal, Pipalgaon, Baroodkhera, Pora, Gadrana, Jalali, Ogar, Chandoli, Sankara, Mudhakhera) are more found clustering around the Lal Qila sites (Ramjit and Abid 2001-02).Unlike Lal Qila, none of the sites have been excavated.

There are certain points which need further clarification.

1. The nature of pottery in large number if recovered from these above mentioned sites should be compared with the Lal Qila pottery complex.

2. Do these clusters of OCP sites have concrete structural and constructional activities?

3. Only in one of the OCP clusters near Lal Qila has a single site (Kiratpur) revealed a Copper Hoard.

4. So far these sites are found on the banks of rivers or besides lakes. This seems to have been necessary for their habitation.

5. In terms of associating OCP with Copper Hoard as has been evidenced from Saipai and Madarpur, are there any sites of this nature in the vicinity of the above mentioned cluster of OCP sites?

Future extensive excavations to the above mentioned clusters of OCP sites around Aligarh-Bulandshahar will provide a great breakthrough to solve the ambiguity or enigmatic nature of OCP in general and habitation in particular.

TABLE 2: OCP SITES WITH BRIEF DESCRIPTION

S. No	Site	Location	District	Chrono-Culture	References
1	Akrabas		Bulandshaher	OCP+PCW+L. HIS	GHOSH,1989: 11
2	Chandpur		-	OCP+PGW+S.K	GHOSH,1989: 95
3	Deevlakhara		-	OCP+L.HIS	GHOSH,1989: 118
4	Daulatpur	24^0 14'; 78^0 11'	-	OCP	GAUR 1995: 215-19
5	Khanpur		-	OCP	
6	Lal Qila	28^0 31'; 78^0 01'	-	OCP	GAUR 1995
7	Alipura		Saharanpur	OCP	IAR 1967-68
8	Anwarpur Baroli	30^0 08' N; $77^0$09E	-	OCP+S.K	JOSHI,1984:522
					IAR 1964-65:44
9	Baundki	30^0 04' N; 77^0 37'E	-	OCP+M.H	IAR 1966-67:43
10	Bakaraka Mound	30^0 00' N; 77^0 27' E	-	OCP+PGW	JOSHI,1984:522
11	Bazidpur	30^0 03' N; 77^0 36' E	-	OCP+M.H	IAR 1966-67:43
					JOSHI,1984:522

11	Bazidpur	30^0 03' N; 77^0 36' E	-	OCP+M.H	IAR 1966-67:43
					JOSHI,1984:522
12	Bhedki	29^0 57' N; 77^0 36' E	Saharanpur	OCP/P.U.H	IAR 1967-68
					JOSHI,1984:522
13	Bholni	30^0 07' N; 77^0 41' E	-	OCP	IAR 1964-65:44
					JOSHI,1984 1984:522
14	Budhakhera Ahir	29^0 58' N; 77^0 42' E	-	OCP	IAR 1964-65:44
					JOSHI,1984:522
15	Chhajpura	29^0 59' N; 77^0 37' E	-	M.H+OCP	IAR 1966-67:43
					JOSHI,1984:521,522
16	Chilhera	30^0 2' N; 77^0 39' E	-	M.H+OCP	IAR 1966-67:43
					JOSHI,1984:521,522
17	Chunehti Sekh	29^0 54' N; 77^0 43' E	-	M.H+OCP	IAR 1967-68
					JOSHI,1984:521-522
18	Daudpur	30^0 05' N; 77^0 36' E	-	M.H+OCP	IAR 1966-67
					JOSHI,1984·521,522

19	Fatehpur Jat	29^0 56' N; 77^0 36' E	-	M.H+OCP	IAR 1966-67:43
					DIKSHIT ,1982 (a):115
					JOSHI,1984
20	Ghana Khandi	30^0 04' N; 77^0 36' E	Saharanpur	M.H+OCP	IAR 1966-67:43
					JOSHI,1984:521,523
21	Jainpur		-	OCP	IAR 1964-65:44
22	Kabirpur	30^0 05N;$77^0$38'E	-	M.H+OCP	IAR 1966-67:43
23	Kailashpur	$29^0$59' N; 77^0 39' E	-	M.H+OCP	JOSHI,1984:523,521
24	Khatauli	30^0 00'N;$77^0$40'E	-	M.H+OCP	IAR 1964-65:44
					IAR 1966-67:43
					JOSHI,1984:523
25	Kheda Jat		-	OCP/ P.U.H	IAR 1984-55:92
26	Kridhni	29^0 55' N; 77^0 30' E	-	M.H+OCP	IAR 1966-67:43
					DIKSHIT,1982(a): 114
					JOSHI, 1984:521,523
27	Mandla	30^0 04: 77^0 39'E	-	OCP	IAR 1966-67:43

					JOSHI,1984:523
28	Mandowala	30^0 05' N; 77^0 45'E	-	OCP	IAR 1964-65:44
					JOSHI,1984:524
29	Matki Jharauli	30^0 04' N; 77^0 35'E	Saharanpur	M.H+OCP	IAR 1966-67:43
					JOSHI,1984, 521 523
30	Mohiuddinpur	30^0 00' N; 77^0 38' E	-	M.H+OCP	IAR 1966-67:43
					JOSHI,1984: 521, 523
31	Nirpalpur	30^0 01' N; 77^0 29' E	-	M.H+OCP	IAR 1964-65:44
					DIKSHIT,1982 (a): 115
32	Pinjaura	29^0 56' N; 77^0 33' E	-	M.H+OCP	JOSHI,1984: 521,523
					IAR 1966-67 :43
33	Rajadhana	30^0 00' N; 77^0 28' E	-	OCP	IAR 1964-65:44
34	Reri	29^0 55' N; 77^0 29 E	-	OCP	IAR 1966-67:43
35	Salepur Bhokri	30^0 02' N; 77^0 35' E	-	OCP+PGW	IAR 1966-67:43
36	Sarkari Kumar	30^0 02' N; 77^0 33' E	-	OCP	JOSHI,1984: 524
					IAR 1966-67:43

37	Sarkari Sheikh	30^0 00'N; 77^0 36' E	-	M.H+OCP	JOSHI,1984:524
					IAR 1966-67: 43
38	Sherpur	29^0 53' N; 77^0 39' E	Saharanpur	M.H+OCP	IAR 1966-67:43
					JOSHI,1984:521,523
39	Shukartal	29^0 55' N; 77^0 17'E	-	OCP	IAR 1965-66:54
					JOSHI,1984: 523
40	Sikri	29^0 53' N; 77^0 38'E	-	OCP	IAR 1964-65:44
					JOSHI,1984: 523
41	Tahirpur	29^0 55' N; 77^0 32' E	-	OCP+PGW	IAR 1964-65:44
	Tauli		-	OCP	IAR 1965-66:54
42	Alipura		Muzaffarnagar	OCP	SRIVASTAVA,1982: 54
43	Badhai Kalan		-	OCP+S.K +MED	SRIVASTAVA,1982:57-58
44	Chandan		-	OCP	SRIVASTAVA,1982: 133-5
45	Dungar	29^0 15' N· 77^0 22' E	-	P U H/OCP	IAR 1986-87: 80

46	Jaula	29^0 16' N; 77^0 25' E	-	P.U.H/OCP	GAUR&LAL,1992;378
47	Jhal	29^0 16' N; 77^0 20' E	-	P.U.H/OCP	GAUR&LAL, 1992;578
48	Jhinhana	29^0 30' N; 77^0 15' E	-	OCP+PGW	JOSHI,1984; 523
49	Khan Jahanpur		-	OCP+PGW+MED	SRIVASTAVA,1982; 703
50	Kudana	$29^0$25' 45" N; 77^0 22' 20' E	Muzaffarpur	P.U.H/OCP+PGW	GAUR&LAL,1992: 378
51	Kuleheri		-	OCP+PGW+NBP+MED	SRIVASTAVA,1987:66
52	Ladava		-	OCP+PGW	SRIVASTAVA,1982-104-07
53	Mahmoodpur		-	OCP+MED	SRIVASTAVA,1982: 75-8
54	Mulaheri I	29^0 23' 15" N; 77^0 40' 10" E	-	P.U.H/OCP	GAUR&LAL, 1992:378
55	Mulaheri II	29^0 23` 15" N; $77^0$ 40` 10" E	-	P.U.H/OCP	GAUR&LAL, 1992:378

56	Nala	29^0 17' 20" N; 77^0 16' 40" E	-	P.U.H/OCP	GAUR&LAL, 1992:378
57	Pipalsa	29^0 21' 22" n; 77^0 40' E	-	OCP+NBP+E.HIS	SRIVASTAVA,1982; 83-6
58	Pur Balian II	29^0 21' 22" N; 77^0 40' E	-	P.U.H/OCP	GAUR&LAL, 1992; 378
59	Shamli shamla		-	P.U.H/OCP+PGW	GAUR&LAL, 1992; 376
60	Shikarpur	29^0 23' N; 77^0 39' E	-	P.U.H/OCP	GAUR&LAL, 1992; 379
61	Toda	29^0 17' N; 77^0 32E	-	OCP+PGW+S.K	GAUR&LAL, 1992; 379
62	Bhalari	30^0 01'24'' N; 77^0 0 2' E	Kurukshetra	P.U.H/ OCP	KUMAR,1978: 64
63	Khambahera		-	P.U.H/ OCP	KUMAR,1978: 52
64	Ladanachaku	29^0 59' 40" N:76^0 15' 38" E	-	P.U.H/ OCP	KUMAR, 1978: 52-53
65	Rattakhera	30^0 05' N; 76^0 16' E	-	P.U.H/ OCP	KUMAR,1978: 54
66	Sampan Kheri		-	P.U.H/ OCP	KUMAR,1978: 61
67	Sarola	29^0 02 N; $76^0$15'E	-	OCP+PGW	KUMAR,1978: 54

					JOSHI,1984:524
68	Pahlwan	29^0 39' N; 76^0 12' E	Jind	OCP+Sothi.-Siswal	SURAJ BHAN&
					SHAFFER,1978:62
69	Au		Bharatpur	OCP+BRW+PGW	IAR,1965:66
70	Noh	27^0 13' N; 77^0 30' E	-	OCP+BRW+PGW+NBP+S.K	IAR1963-64: 28-9
71	Helmana		Alwar	OCP	IAR: 1980-81:55
72	Karinkot		-	OCP	IAR 1980-81:55
73	Ramnagar		-	OCP	IAR 1980-81:55
74	Malyali		Sikar	OCP+ Monoliths	IAR 1981-82: 62
75	Badal		Meerut	OCP	IAR 1978-79: 24
76	Gulistanpur	28^0 30' N; 77^0 30' E	Meerut	M.H/OCP	IAR 1963-64: 91
					JOSHI,1984
77	Saket colony		Meerut	OCP	IAR 1981-82: 103
78	Gulalriya		Badaun	OCP+PGW+E.HIS+ MED	IAR 1978-79: 21
79	Fafiabad		Badaun	OCP	IAR 1978-79: 22
80	Sirsa Ther		Badaun	OCP+ PGW+S-K+MED	IAR 1978-79: 22

81	Mujahidpur		Hardoi	OCP+CO.H	IAR 1978-79:101
82	Deoti		Lucknow	OCP+CO.H	B.B LAL,1951: 29
					IAR 1978-79: 101
					M.LAL 1984a ;34-5
83	Dhansa	23^0 31' N; 76^0 56' E	Delhi	OCP+P.U.H+M,H	BHAN,1975: 112,116
					SHAFFER,1978:67
84	Kamalpur		Hardo	OCP+CO.H	IAR 1978-79:101
85	Kausambi		Allahabad	CO.H/OCP	V.SMITH, 1906:232
					M.LAL, 1984 (a) 36-37
					SHARMA,D.P. 2001
86	Mathura		Mathura	CO.H/OCP	M. LAL,1984 (a) 36-7
87	Pariar	26^0 35' N; 80^0 20' E	Unnao	OCP+CO. H+Black Slip+PGW+NBP+S.K	FUHRER,1891; V.SMITH, 1907:53
					IAR 1953-54:38;1978-79:60
					LAL& DIKSHIT,1982

					M.LAL, 1984
88	Sand	30^0 10' N; 77^0 15' E	Smbala	P.U.H/OCP	IAR 1963-64;27; BHAN 1975;124
					JOSHI,1984;524
89	Amroha		Moradabad	CO.H+OCP	SHARMA,D.P,2001
90	Kauriaganj		Aligarh	OCP+PGW+S.K	IAR 1965-66:84
91	Morthal		Aligarh	OCP+PGW+NBPW+L.HIS.	GHOSH; 1989:293
92	Atranjikhera	$27^0$42'; 78^0 44'	Etah	OCP+BRW+PGW+NBP+S.K+MED	GAUR 1983
93	Jakhera	$27^0$48'; 78^0 35'	Etah	OCP+PGW+NBP	SAHI 1994

Abbreviations:

OCP = OCHRE COLOURED POTTERY

PUH = POST URBAN HARAPPAN

PGW = PAINTED GREY WARE

NBP = NORTH BLACK POLISH

BRW = BLACK AND RED WARE

M.H = MATURE HARAPPAN

E.HIS = EARLY HISTORICAL

MED = MEDIEVAL

L.HIS = LATE HISTORICAL

S.K = SUNGA-KUSHANA

CO.H = COPPER HOARD

NOTE: After the list provided by D. P Sharma in his book Newly Discovered Copper Hoard, Weapons of South Asia & Dallaporta, Annamaria & Lucio Marcata (2005) *Archaeological Sites of South Panchala: Data from Archaeological and Literary Sources.*

CHAPTER III

Pottery Analysis

Ceramic production is one of the oldest crafts practiced by early communities utilizing clay, a widely available material. Pottery was introduced only from the Neolithic, this being a function of the subsistence strategies followed by early communities. Pottery would have been a liability for mobile people and finds its place in society largely with sedenterization. But once introduced, pottery quickly became indispensable. For the archaeologists, this resulted in pottery becoming the major artifact-type in a site's assemblage.

The dating and distribution of ceramics is significant, but equally important is the function of the pottery in its living context and what it may indicate about the organization of settlement, and the social economic ritual and symbolic life of past societies (Drewett 2001: 147). Before the arrival of absolute dating methods, archaeologists used pottery primarily as a chronological indicator or to produce typologies based on changes in vessel shape and decoration. Tempering materials added to harden pottery may have been procured from a particular geographical source, and if pots were found far away from the source then it is obvious that they must have moved perhaps through trade, gift exchange or movement of the pots owners (Drewett 2001: 147).

The three key elements of pottery analysis are fabric, form and decoration. The form or morphology of a pot consists of four main elements: its base, body,

neck and rim. If a whole pot is found, all four elements can be used to describe its shape or form but most pottery is recovered in the form of fragments. Harappan pottery, for example, has its own uniqueness in terms of form and is easily identifiable through perhaps such as beakers, perforated jars, S-shaped jars, ring stands, goblets with pointed base, dish with nail-headed rim, etc. Similarly, Late Harappan potteries are recognizable based on changes in form such as dish-on-stand with drooping rim, jar with horizontal splayed out rim, jar with everted rim, and bowl like lid with central knob. Some common OCP forms are vase with flanged rim, vase with loop handle lid, lid with central knob, convex sided bowl, dish-on-stand with short stem etc (Gaur 1970-71).

Recognizing pottery types on fabric is extremely important. Fabric is the outer physical surface of the pottery which is a combination of factors such as clay used, degraissant mixed, firing technique (i.e. oxidation and reduction) etc. It was the observation of the fabric by B.B. Lal of certain sherds from Hastinapura that led to him proclaiming OCP as a different pottery type.

Another aspect of the physical form of pottery is decoration and surface treatment. This has impacted on the delineation of different protohistoric and historic pottery in the Indian sub-continent as Northern Black Polished Ware (NBPW), Painted Grey Ware (PGW), Black & Red Ware (BRW), Red Ware, Lustrous Ware, Black-on-Red Ware (BRW), OCP, etc.

The intention in this chapter will be to use one of the variables that are used to compare pottery types which is the variable of form or morphology. The

variable of fabric will not be the focus of this chapter as fabric can profitably only be compared in laboratory conditions through thin section studies.

If we use morphology, one of the problems that arises is that few OCP sites have been excavated and their reports published. This means that we have very few complete pottery analyses that can be used for our purpose. In cases such as Hastinapura, where an excavation report exists, the potsherds found from OCP levels are too few to deal with. Thus, we are left with two sites in western Uttar Pradesh (Lal Qila and Atranjikhera) for both of which detailed reports are available for study. Lal Qila is a single culture OCP site in contrast to Atranjikhera. Another single-culture OCP in the vicinity of Lal Qila, that is, Daulatpur, unfortuanately has only been briefly reported.

One of the advantages in comparing ceramic types from Atranjikhera and Lal Qila is that these two sites were excavated by the same excavator, R.C Gaur. This has obviously meant that the system of classification to assess pottery types would be the same. This has made it easier for us to compare the ceramic types from these two sites to assess the degree of similarity between them. Do the ceramic assemblages from these sites suggest a uniform 'OCP culture'?

A second analysis that has been undertaken in this chapter is to compare ceramic types from OCP sites such as Lal Qila and Atranjikhera with sites of other affiliation such as "Late Harappan" Mitathal IIB or Bhagwanpura IA. In a similar vein, the OCP pottery from Lal Qila and Atranjikhera been compared with Sothi/Siswal ceramic types. This is because some recent work is veering towards

attributing an 'Early Harappan' or 'Pre-Harappan' affiliation to OCP. In this context, a specific pottery type, that is bowl, was compared from the site of Kalibangan Period I with Lal Qila and Atranjikhera.

Comparative pottery Analysis

Lal Qila with Atranjikhera

Type: Bowl (FIG. 1)

Bowls in shape and size between the two sites show resemblances like out-turned thickened pointed rim, flattened top, thickened and rounded rim, out-turned internally sharpened, bevelled rims and so forth. However, majority of the shapes differ slightly with each other. Bowls recovered from Atranjikhera in terms of varieties are fewer in comparison to those recovered from Lal Qila. Some of the Lal Qila bowls have special decorations like bands in black pigment and some have incised designs and graffiti marks. These decorations are completely absent from Atranjikhera with none of the bowls having paintings on the surface. Some unique shapes found in Lal Qila which are absent in Atranjikhera are bowls with incurved featureless rim, incurved rims almost closing the mouth of the bowl and out-turned rims having a prominent depression externally below the rim.

Type: Basin (FIG. 2)

The basins reported from Lal Qila are of various shapes and are large in number. Basins of Lal Qila match with those of Atranjikhera. Similar shapes are those with out-turned clubbed, nail-headed, beveled rims, out-turned featureless rims, splayed

out rims with internal depression rim and so forth. But basin shapes from Lal Qila show no similarity to Atranjikhera forms like those with beak-shaped rims, everted carinated rims, basins with handles etc.

Type: Jar (FIG. 3)

Jars have been reported from both the sites. Some common features of jars from both sites are those with out-turned and out-curved featureless rims, flat rims, and those with thickened and externally bevelled rims. Certain distinguishing features which are found in Lal Qila but absent in Atranjikhera are out-curved pointed forming beak-shaped rim, drooping rim. Painted designs are found on Lal Qila's some of the jars like horizontal black band, rim band, geometrical and triangular designs etc. Such painted designs are absent from Atranjikhera.

Type: lid (FIG. 4)

Lids as a pottery type are reported from both the sites. Both the sites show common features in lids like flaring sides with saggar base, incurved sides, out-going with flattish top, central knob etc. But some lids with vertical featureless side and pointed base, flaring side and squattish knob with deep depression and those with more raised knobs are absent from Atranjikhera.

Type: Vase (FIG. 5)

Vases comprise one of the most common categories from both the sites. Vase types that are similar between Atranjikhera and lal Qila are those with flanged and externally drooping rims, out-curved and out-turned featureless rims having slight

depression below the rim, flared and roughly sharpened splayed out rims, externally beveled rim etc. However, some of the vase shapes from Lal Qila are absent from Atranjikhera like nail-headed rims and beak-shaped rims. The prominent difference between the two is that rib bands in black pigment found on vase shoulders from Lal Qila are absent in Atranjikhera and decorations like geometrical triangular painted design in black pigment are also absent. Vases are also shown with handles in the Lal Qila excavation report. Such characteristic features are absent at Atranjikhera.

Type: Miniature pot (FIG. 6)

Miniature pots have been recovered from both the sites. Common features in this pottery forms from found in both the sites are out-turned rim, splayed out and out-curved rim etc. Some pots have rimless mouth and collared rims. Paintings and incised decoration found in miniature pots from Lal Qila are absent at Atranjikhera.

Type: Ritualistic/Toy pot (FIG. 7)

Several miniature pots which might have been used either for ritualistic purposes or as play objects for children are reported. The characteristic feature of toy pots are those with convex sides and flat base, vertical featureless rim with flaring sides having depression at the neck, slightly incurved sides and a saggar base. These shapes or types have not been mentioned in the Atranjikhera report. Difference between the above form and ritualistic pots may be that the latter were used occasionally.

Type: Handle (FIG. 8)

Broken handles are found from both the sites. One handle with rounded section is similar between the sites. A fragment of handle that may have been on the rim of a basin was absent in Lal Qila. A fragment of a handle showing cylindrical shape with three ribbed projections and conical top was absent from Atranjikhera.

Type: Dish (FIG. 9)

The Atranjikhera report does not illustrate any dishes. Dishes are present from Lal Qila but are very few with shapes like incurved featureless rims, slightly out-curved and flattened with saggar base body.

Type: Trough (FIG. 10)

Lal Qila shows as many as ten troughs and their shapes include out- turned, splayed-out, beaded rims and thickened slightly featureless rim where as troughs of Atranjikhera have mostly splayed out rims, and some have slight out-turned and featureless rims. Only one trough matches between the two sites.

Type: Dish/Bowl-on-stand

Dish/ Bowl-on-stand is the type in entire ceramic assemblage of Atranjikhera and Lal Qila in which this particular kind is present but none of the specimens match with each other. Dishes of dish-on-stand from Atranjikhera show splayed out featureless rims having depression below, whereas dishes of dish-on-stand from Lal Qila show shallow dishes with thick drooping rim. Stands of dish-on-stand in both the sites also differ. Lal Qila shows thickened bases with elliptical sharpened ends, while Atranjikhera shows tapering sides for most stands.

Paintings:

Very few painted designs were found from Atranjikhera. Paintings of Lal Qila hardly show any resemblance with the paintings of Atranjikhera except band like paintings in black pigment. At Lal Qila a variety of painted designs were found unlike the simple painted bands from Atranjikhera.

Incised Design: (FIG. 11)

Incised designs were found on sherds from Atranjikhera and Lal Qila. Some of the designs were similar between the two sites. Those which are similar between Lal Qila and Atranjikhera are dashes in vertical rows, notches in varying sizes, V-shaped pattern, check-pattern, parallel lines forming rectangular design, oblique parallel lines etc. From Atranjikhera was found a special incised design of notches forming a rope made by finger nails which is absent from Lal Qila. At Lal Qila emphasis was given to dashes in different form, where as at Atranjikhera emphasis was given to the grooves.

Wavy Lines: (FIG. 12)

Wavy lines another variety of decorative motif depicted on the vessels found from both the sites. Out of some designs only single of kind matches with each other.

Graffitti Marks:

Sherds from Lal Qila have graffitti marks which are not seen on Atranjikhera potsherds. On the other hand Lal Qila shows line marks in quadrilateral form, star form, and two lines intersect by an oblique line, rhombus form, couples of swastika type line etc.

Bhagwanpura with Atranjikhera

At the site of Bhagwanpur a two fold cultural sequence was revealed after being excavated horizontally by J.P Joshi in 1975-76. According to Joshi (1993: 23) periods were designated as IA and IB and further potteries of IA were categorized into different traditions on the basis of ceramics:

1. Red Ware of Late Harappan type.
2. Ochre Coloured Ware from the trenches of flood affected horizon.
3. Red Ware similar to Cemetery-H.
4. Incised Ware having a variety of designs like Pre-Harappan.
5. Thick Grey Ware generally associated with Harappan and the Late Harappan assemblages.
6. Pottery of Bara type.

Here we will compare the ceramic forms from Bhagwanpura with those from Atranjikhera and Lal Qila in turn. Our aim is to assess the degree of similarities or dissimilarities among these sites.

Types: Jar (FIG. 1)

While comparing jars of Bhagwanpura with jars of Atranjikhera, not a single type of this kind of specimen is found showing resemblances. Most of the jars of Bhagwanpura show thickened body with collared rim and high necks. Such forms are completely absent from Atranjikhera. Besides, these variations, the jars of Atranjikhera show mostly out-turned, sharpened and featureless rims. One

common feature between Bhagwanpura and Atranjikhera jars is that these are devoid of paintings.

Types: Basin (FIG. 2)

Comparing the basins of Bhagwanpura with basins from Atranjikhera not a single specimen matches. The Atranjikhera report illustrated several basin types with splayed out, out-turned and out curved, and nail-headed rims. In contrast the shapes of basins from Bhagwanpura include grooved and beaded, in-turned and out-turned collared rims etc. One unusual basin form from Atranjikhera is absent from Bhagwanpura. This form has convex sides and lipped spout. Some of the basins from Bhagwanpura have paintings in black bands.

Types: Miniature Pot (FIG. 3)

About five or six miniature pots have been illustrated in the Atranjikhera report, none of which, however, match with those from Bhagwanpura. One striking element among the miniature pots of Bhagwanpura that these include miniature vases, miniature jars, miniature bowls etc. These specimens are absent from Atranjikhera.

Types: Dish-on- stand (FIG. 4)

In the Bhagwanpura report numerous dish-on-stand types have been found, but hardly any single specimen shows similarity with those from Atranjikhera. In Bhagwanpura not a single portion of the dish has been illustrated, instead the report illustrates only a number of bases. The Bhagwanpura report also reports the stem portion of the stand with corrugations as an external characteristic. One or

two basal fragments show painted bands. From Atranjikhara a complete dish as a part of a dish-on-stand has been illustrated. The base fragment of a dish-on-stand of Bhagwanpura shows mostly raised edges which are absent in Atranjikhera. In contrast, the basal portion of Atranjikhera's dish-on-stands are mostly splayed out and featureless.

Type: Lid (FIG. 5)

In the Bhagwanpura report, very few lids have been shown and these lids differ from Atranjikhera. The characteristic feature of Bhagwanpura lids is that all have prominent knob but not a single portion of the lower part is intact. In the Atranjikhera report both the knob portion and the lower portion of lid have been shown. Thus, due to such variations not a single type shows resemblances between the two sites.

Type: Bowl (FIG. 6)

Bhagwanpura report illustrates about three to four types of bowls which do not match at all with the illustrated bowls from Atranjikhera. The characteristic feature of the Bhagwanpura bowls are out-turned flaring rims and a single specimen of a bowl's basal portion has been shown with a discular flat base. This kind of disc base has not been found from Atranjikhera. Bowls from Atranjikhera have forms with out-turned, nail-headed, clubbed and featureless rims.

Type: Vase (FIG. 7)

Bhagwanpura's vases do not show any resemblances with the Atranjikhera vases. Vases of Bhagwanpura are not painted unlike those from Atranjikhera which have

broad black bands painted on the neck. The characteristic features of Atranjikhera vases are forms with flared, flanged, out-turned and out-curved rims; these are totally absent from Bhagwanpura. Vase forms from Bhagwanpura have beaked undercut rims, clubbed undercut rims and so forth.

Type: Trough (FIG. 8)

Not a single trough has been illustrated in the Bhagwanpura report. However, this form has been found at Atranjikhera. Troughs of Atranjikhera have mostly splayed out rims, and some have slight out-turned and featureless rims.

Type: Handle (FIG. 9)

No pottery handles were found from Bhagwanpura in contrast to Atranjikhera, whereas various types of handles have been reported from Atranjikhera.

Type: Dish

Bhagawanpura report shows various types of dishes especially with out-turned flaring, out-turned grooved, beaded drooping and clubbed rims. Not a single type of dish has been found from Atranjikhera. This is strange as dish-on-stand as a type was known at Atranjikhera.

Type: bowl-cum-lid

Bowl-cum-lid is a type found from Bhagwanpura which is absent at Atranjikhera. This form has mostly out-turned grooved rims, incurved externally rims and everted rims.

Type: Cup-on stand/cup

Similarly, at Bhagwanpura were found cups and cup-on-stand, a type absent from Atranjikhera. The characteristic feature of cups is that they had out-turned bevelled rims and a bulbous body. The pedestal portion has mostly been recovered sometimes, the pedestal portion up to the body is found decorated with black paintings.

Paintings:

Not a single painting in the design repertoire is shared between Bhagwanpura and Atranjikhera. The variety of paintings shown on Bhagwanpura sherds include geometrical, wavy lines, faunal and floral motifs. Some designs are found between horizontal bands. Check patterns and thick horizontal bands are also distinctive. At Atranjikhera largely paintings in the form of black bands on the shoulder of vessels have been found.

Incised Designs:

Out of numerous incised designs shown in both Bhagwanpur and Atranjikera reports, only a single incised design shows some resemblance. This is the motif of lines forming check design in oblique lines. The majority of the incised designs from Bhagwanpura include, horizontal lines, wavy lines, nail cut marks, mat-type design, parallel ridges, zigzags line etc. On the other hand, incised designs at Atranjikhera include rib or chord and notches, parallel dashes, straight dashes and so forth.

Bhagwanpura with Lal Qila

Type: Dish-on-stand (FIG. 1)

The Bhagwanpura report illustrates a number of types of dish-on-stands. However, from this site the dish portions are less in number than the stands. Stands of various types have been shown, some of them with band like paintings in black. The stem portion with corrugation marks is absent from Lal Qila. Only two or three dishes of dish-on-stand from Lal Qila match with Bhagwanpura stands. One specimen of dish of dish-on-stand from Bhagwanpura shows paintings of opposed triangles in black. The stand portions from Bhagwanpura mostly show raised edges on the base, while the dish portion shows drooping rims. Drooping rims are also present from Lal Qila but do not resemble the Bhagwanpura type.

Type: Miniature pot (FIG. 2)

Various types of miniature pots have been shown in the Bhagwanpura report in the form of miniature vase and miniature jar. These types are absent from Lal Qila. These miniature pots are well made, having paintings of geometrical designs and bands. Not a single miniature pot of this type with designs has been reported from Lal Qila. Generally at Lal Qila miniature pots includes forms with out-turned flaring under-cut rims, in-turned rims with depression below a rimless mouth, out curved featureless rim etc.

Type: Basin (FIG. 3)

A number of basins has been illustrated in the Bhagwanpura report, but only two types from Lal Qila match with those from Bhagwanpura. Bhagwanpura basins are

of various types with grooved headed, in-curved featureless, out-turned grooved and collared rims etc. On the other hand numerous basins of various types have been shown in the Lal Qila report. Lal Qila basins include out-turned and out-projected bevelled rims, grooved, beaked and collared rims etc. Both the sites report black paintings on the surface of some basins, but the paintings themselves differ from each other. Paintings on Bhagwanpura basins include horizontal lines with two flaring bands, while paintings on Lal Qila basins have rim bands at the top.

Type: Bowl-cum-lid (FIG. 4)

Bowl-cum-lid as a type is absent from Lal Qila just as it was absent too at Atranjikhera. Lids are found and include basically out-turned carinated rims, out-turned incurved rim and grooved flaring rims etc.

Type: Cups/Cup-on-Stand (FIG. 5)

Cups and cup-on-stands are two different types illustrated from Bhagwanpura. Both of these types are absent in the Lal Qila report. The characteristic feature of cups is that, they have out-turned bevelled rims and bulbous body. As far as cups-on-stand are concerned, the upper portions are mostly absent while the pedestal part has been illustrated. Some of the fragments are decorated with black paintings.

Type: Dish (FIG. 6)

Bhagwanpura report shows a number of dish types with out-turned and out-projected flaring rims, externally grooved beaded rims, clubbed rims, externally

grooved beaded rims, undercut rims, long flaring rims and so forth. Lal Qila neither can be compared quantitatively nor typologically with Bhagwanpura. One type of dish matches with those from Bhagwanpura. The majority of Lal Qila dishes show slight incurved featureless rims.

Type: Lid (FIG. 7)

Four or five lid types have been illustrated in the Bhagwanpura report. All the lids which have been shown have a knob like form. Bhagwanpura lids differ according to the shape of knob; some knobs are cylindrical, conical or short. On the other hand, Lal Qila report illustrated numerous lids, of which both the upper and lower portions have been recovered. While comparing lids, not a single lid matches between Lal Qila and Bhagwanpura. Mostly the variant is of splayed-out, out-turned, out-going, vertical featureless rims. The base portion is again different with saggar and pointed bases with the former more common.

Type: Ritualistic or Toy pot (FIG. 8)

Bhagwanpura report does not illustrate any ritualistic or toy pots as have been found from Lal Qila. Generally all the ritualistic pots at the latter site are categorized into three forms i.e. pots, bowls, and lamps. Shapes have slightly incurved, vertical, featureless rim and bases are conical, saggar, rounded etc. Both the miniature pots and toy pots are more or less same in sizes but differ in their finish. Miniature pots as it appears are technologically better made and may have been used for more utilitarian purposes unlike ritualistic/toy pots used merely for playing purpose or may be used occasionally.

Type: Bowl (FIG. 9)

Bhagwanpura report illustrated only three bowl shapes. The types do not match with bowls of Lal Qila. Bowls of Bhagwanpura are shown with projected flaring rim and a discular flat base. The Lal Qila report in contrast to Bhagwanpura illustrates a number of bowls with a great typological variety. However, not a single resemblance is found among bowls between the sites. The characteristic designs on Lal Qila bowls are paintings in the form of black bands.

Type: Trough (FIG. 10)

Troughs as a type have not been illustrated in the Bhagwanpura report. Lal Qila shows as many as ten troughs and their shapes include out- turned, splayed-out, beaded rims and thickened slightly featureless rim. One of the shapes shows a flat-footed base and another has broad bands painted in black.

Type: Jar

Jar types are found from both the sites. Bhagwanpura jars are totally different from those of Lal Qila. Except for one or two forms, hardly any jars show resemblance between the sites. Lal Qila jars have characteristic features like out-turned beaded, collared rims, obliquely bevelled collared rims, obliquely bevelled grooved rims, out-turned and thickened rims etc. The Bhagwanpura report shows high necked jar with out- turned flanged, flaring, beaked under-cut and collared rims etc. Jars from Lal Qila have decorative paintings on the shoulder, horizontal band in black colour. High necked jars are absent from Lal Qila. Painted jars are absent from Bhagwanpura.

Type: Handle

From Lal Qila are reported, handles, a form absent from Bhagwanpura.

Paintings: (FIG. 11)

Hardly any painted designs are similar between Lal Qila and Bhagwanpura. Lal Qila painted designs are check patterns, floral, faunal, geometrical, horizontal bands, comb shaped and denticulate designs. Wavy lines and check pattern somewhat match between the two sites, but neither are unusual design forms. Some paintings of Lal Qila totally differ from Bhagwanpura, like hind legs of animal, denticulate pattern, snake, bull painting on the surface of one of the pots etc.

Incised Designs: (FIG. 12)

Only a single single incised design (checked design in oblique lines) from Lal Qila matches with Bhagwanpura, which was also the case with Atranjikhera. Numerous incised designs are reported from both the sites.

Graffitti Marks:

Graffitti marks are a unique feature of Lal Qila pottery, which is not found from Bhagwanpura. Graffitti marks from Lal Qila include ladder shaped, cross cut by a horizontal line, quadrangular, rhombus and so forth.

Mitathal with Lal Qila and Atranjikhera

Mitathal is a Harappan and Late Harappan site situated in the Hissar District of Haryana. It was excavated in 1968 by Suraj Bhan. The entire cultural

deposition was divided into two periods—Mitathal I and II. Mitathal II period was further divided into two phases, Mitathal IIA and Mitathal IIB.

Mitathal period I was co-related with Late Siswal

Mitathal period IIA was co-related with Harappan culture.

Mitathal period IIB was co-related with Late Harappan culture.

In order to estimate the prevalence of similarities between OCP pottery and Late Harappan pottery, the pottery from Mitathal IIB was compared with that from Lal Qila and Atranjikhera.

Type: Jar (FIG. 1)

While the number of jars shown ins the Mitathal IIB report are limited, only one shape of jar with beaded rim matches with that from Lal Qila and Atranjikhera. Jar shapes with collared rim and wide mouth, vertical beaded rim do not match with those from Lal Qila and Atranjikhera. Mitathal IIB jars show painted designs that includes parallel horizontal bands enclosing zigzag lines and other bands in black pigment. Out-turned beak-shaped rim have also been illustrated which are absent in Atranjikhera while a single specimen of this kind is present at Lal Qila.

Type: Vase (FIG. 2)

As many as hundred vases have been illustrated in the Lal Qila and Atranjikhera reports. Mitathal IIB pottery also includes many vases of different types. Vases with flanged rim and out-turned beaded rim match with Atranjikhera while the out-turned beaded rim type is absent at Lal Qila. Vases with flaring rim matches with both Lal Qila and Atranjikhera. Vases in the Mitathal IIB report does show

some resemblance with those from Lal Qila and Atranjikhera. However, the types from Mitathal IIB which do not match with Lal Qila and Atranjikhera are vases with beaked rims, beaded rims, globular profiles, and so forth. The characteristic feature of vases from Mitathal IIB is that the majority have paintings on the shoulder in the form of horizontal bands. Lota shaped vase from Mitathal IIB has not been found from Lal Qila or Atranjikhera.

Type: Bowl (FIG. 3)

Bowl as a type has been illustrated in the Mitathal IIB, Lal Qila and Atranjikhera excavation reports. Only one or two bowl shapes match with those from Lal Qila and Atranjikhera, which is, bowls with flaring rims and bowls with featureless rims. The majority of the bowl shapes from Mitathal IIB are different from the types found from Lal Qila and Atranjikhera. Bowl shapes from Mitathal IIB that completely differ from OCP sites are those with squattish forms and carinated shoulders, beaded rim carinated shoulder, out-turned beaked rims, disc bases and so forth. A number of bowls from Lal Qila have paintings in broad bands.

Type: Basin (FIG. 4)

Basins have been reported from Mitathal IIB. Out of the basins illustrated, only a single type matches with those from Lal Qila that is basin with a. flaring undercut rim. None of the Atranjikhera basins matches with Mitathal IIB basins. Generally the characteristic features of basins from Mitathal IIB are flaring undercut rims, carinated shoulders, out-turned rims and so forth. Basins from Atranjikhera have various shapes like prominently out-turned rims, pointed, splayed out rims, club-

shaped rims, nail-headed rims and so on. Basins from Lal Qila are also of various shapes which include out-turned featureless rims, out-projected pointed rims, everted rims, beak-shaped rims, out-turned beaded rims, nail-headed rims and so forth. Basins from Lal Qila also have handles while some of them have designs of thin black painted bands.

Type: Dish (FIG. 5)

From Mitathal IIB were found dishes of various shapes. Dish as a type is absent from Atranjikhera, while some of the dish forms were illustrated in the Lal Qila report. However, none of the dishes from Lal Qila match with the dishes of Mitathal IIB. Various shapes of dishes from Mitathal IIB are those with clubbed rims, thickened rims, tapering rims, flat bases, hooked rims with carination at the shoulder, etc.

Type: Dish-on stand (FIG. 6)

As far as dish-on-stand as a type is concerned, Mitathal IIB provided numerous examples of various shapes which have not been found from Lal Qila or Atranjikhera. The various shapes included dish-on-stand with raised projected rims, carinated shoulders and ribbed stems, thick slightly drooping clubbed rims, stand with incurved base, stand with expanded base, broad stand, tall stem in cylindrical form, and stand ribbed below the junction. Dish-on- stand is recognized as one of the prominent and prolific types of Mitathal IIB. None of the dish-on-stands shows any resemblance with forms from Atranjikhera and Lal Qila.

Some of the dishes have painted designs. From Atranjikhera and Lal Qila neither the dishes nor the stand portions match with those of Mitathal IIB.

Type: Lid (FIG. 7)

Typologically and quantitatively, few lids have been illustrated in the Mitathal IIB report. None of the specimens match with those from Atranjikhera or Lal Qila. The characteristic shapes of lids from Mitathal IIB are those with bowl like shape with flat top having a central knob, bowl like shape with conical central knob, etc.

Type: Footed vase or goblet (FIG. 8)

Footed vase or goblet is a unique characteristic type found from Mitathal IIB. Such specimens have not been found from Lal Qila or Atranjikhera. These goblets have various forms such as those with a cylindrical globular body with a raised foot base, concave pedestal base and pointed base. Only three or four specimens have been reported from Mitathal IIB.

Paintings: (FIG. 9)

Painted designs are of various types with certain designs of Mitathal IIB matching with those from Lal Qila like criss-cross or check-pattern, parallel lines marked with series of vertical lines, floral designs with enclosing loops, horizontal groups of oblique strokes and circles, opposed triangles etc. But none of any paintings from Atranjikhera shows any resemblance with Mitathal IIB. Some of the designs of Mitathal IIB are completely unique such as hatched leaves, horizontal bands enclosing branches, diamond like check-pattern, etc.

Incised designs:(FIG. 10)

Good number of incised designs from Mitathal IIB have been shown in the Mitathal report. Only a few incised designs from Mitathal IIB match with both Lal Qila and Atranjikhera, i.e. leaf-shaped designs, horizontal parallels in alignment, incised horizontal lines sparsely intersected by oblique slashes. However, majority of incised designs do not show resemblances with either Lal Qila or Atranjikhera.

Graffitti Marks

Graffitti marks are absent from Mitathal IIB and Atranjikhera but have been found on some of the sherds from Lal Qila.

A case study of bowl type from Sothi ceramic industry (FIG. 1)

In order to study the affiliation between OCP and Early Harappan ceramics, it was necessary to undertake a comparsion of OCP and Sothi/Siswal pottery. However, in this section, only a case study is being done of the bowl type between OCP and Sothi.

A. Ghosh conducted an excavation at the site of Sothi in the year 1950-51. Excavations at the site took place before the excavations at Kalibangan (1960-61). The entire gamut of potteries from Kalibangan I have been divided into six fabrics A to F. Sothi pottery has been broadly divided into two groups i.e. 'ill-bred' and 'better textured'. According to Nigam (1993) the Sothians with its 'ill-bred' pottery originated in the Ghaggar/Saraswati/Hakra valley in the desert region of Cholistan and Northern Rajasthan. 'Better textured' pottery was manufactured

sometime in initial stage and the result was a conglomerate ceramic industry during the Sothi/Early Harappan phase.

The ceramic industry was further categorized into three main divisions based on colour, i.e. red ware, buff ware and grey ware. Sothi industry consists of nine types i.e. bowls, basins, jars, troughs, dish-on-stand, lids, cup-on-stand, dishes and vases.

According to Gaur (1987) the OCP industry has affinity with Sothi, a pre-Harappan culture. The shapes of bowls in red ware from Sothi have vertical, internally bevelled, everted, out turned/out curved and thickened rims; profiles are convex or tapering, with ring or high and low pedestal bases. A bowl has been shown with ridge on the body below waist. Other types in red ware are straight sided bowls and in thick sturdy ware are bowls with flaring sides and generally everted rims. In the buff ware category, bowls have collared rims or internally thickened and externally bevelled rims and flaring sides with a ridge. Madhu Bala (2003) also reported shapes of bowl such as bowls of red ware with featureless rim and straight sides/oblique sides/tapering sides, deep bowls with slight out-turned rims, bowls with inturned featureless rims, and tapering sides with ring base. Majority of the bowls mentioned in the Kalibangan report are of featureless rim with tapering or straight sides. In contrast, bowls from Lal Qila consist of out-turned/out-curved rims with convex sides, everted rims with incurved sides, featureless rims and roughly convex sides, nail-headed rims, out going featureless rims with incurved sides, vertical rims and vertical sides, splayed out rims, out-

turned rims with obliquely bevelled internally and incurved sides, slightly inturned and collared rims and so forth.

From Atranjikhera, as pointed out earlier, reported bowl shapes are those with out-turned rims and convex sides, obliquely bevelled rims and incurved sides, out-turned, thickened or clubbed rims and incurved sides, nail-headed rims with hemispherical sides as well as out-turned rims and almost vertical sides.

While comparing shapes of bowls of Sothi pottery with those from Lal Qila, mostly straight sides with vertical featureless rim, internally bevelled rims and flaring sides with everted rims match between the sites. The other bowl shapes markedly differ. Two prominent shapes which are completely absent from Lal Qila are body with ridge and ring base. In terms of comparison of Sothi with Atranjikhera bowls, convex sides or tapering sides, bowls with tapering sides and everted rims are the only matching forms. On comparing Lal Qila bowls with bowls from Kalibangan, the forms that match between the sites include inturned featureless and out-turned featureless rims, and featureless rims with straight sides.

The comparision with Atranjikhera bowls reveals featureless rims and tapering sides and out-turned featureless rims as matching forms. Another striking characteristic about Sothi bowls is that mostly these have black painted designs of various kinds especially broad/thin bands found on the rim or on the neck.

On concluding this chapter we may say, in order to identify an archaeological culture ceramics plays a vital role in deciding its affiliation with other contemporary cultures. The ceramics from OCP sites such as Lal Qila and

Atranjikhera were first compared and then in turn with Late Harappan levels from Mitathal IIB and Bhagwanpura IB and with Early Harappan Sothi. Several types of basins, jars, vases and miniature pots found at lal Qila and Atranjikhera match with each other. However, at the same time, the majority of bowls types differ slightly. There is more morphological diversity of types at Lal Qila as compared to Atranjikhera, as far example, with lids and vases. Certain types like dishes and toy pots are completely absent from Atranjikhera. The other marked difference is that Atranjikhera pottery types very often show paintings unlike Lal Qila. Forms such as the dish/bowl-on-stand show no similarity between the two sites. While incised designs seem to match, no graffiti marks are found on Atranjikhera pottery, which is an one of the feature of Lal Qila ceramics.

In the course of comparison between Bhagwanpura IA and Atranjikhera types like jars, basins, miniature pots, dish-on-stand, bowls, vases and handles do not match. Troughs and lids (lower portion) are absent from Bhagwanpura IA. Dishes, bowl-cum-lid, cup-on-stand are absent from Atranjikhera. Not a single painted design matched with each other while only a single incised design matched i.e. check pattern. After observations both the sites are quite different from each other in terms of ceramics.

When Lal Qila was compared with Bhagwanpura IA, some of the types like dish-on-stand, basins, dishes, and jars seem to show resemblances. However, types like miniature vase, miniature jar, bowl-cum-lid, cup-on-stand are completely absent from Lal Qila. And from Bhagwanpura IA types like lids (lower portion)

ritualistic pots, troughs, handles, are absent. Bowls as a type do not show any resemblance. Out of some of the painted designs, at least three show resemblances. Graffitti marks are absent from Bhagwanpura IA.

Mitathal IIB, a Late Harappan cultural phase, was compared with both Lal Qila and Atranjikhera as far as pottery is concerned. Some of the types like jars, vases, bowls, and basins seem to show resemblances. Mitathal IIB dishes do not show any resemblances. Goblets as a type remained a form unique to Mitathal IIB. From the site of Sothi, bowls as a type category have been compared with those from Lal Qila and Atranjikhera. While comparing bowls of Sothi with Atranjikhera and Lal Qila, it was found that the majority of the bowls have their external surface (rim & neck) painted with certain designs which are absent from OCP sites. Some of the bowl forms matched with both Lal Qila and Atranjikhera. However, ridge and ring bases are absent from both Lal Qila and Atranjikhera.

Type: Bowl (FIG 1)

After Gaur, Atranjikhera (1983)

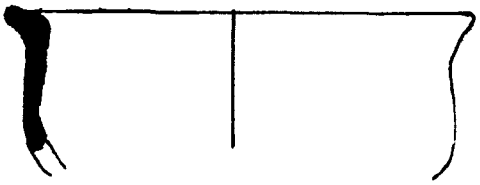


Fig 8, B-27a

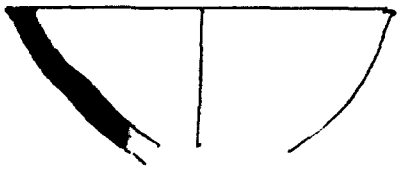


Fig 7, B-13

After Gaur, Lal Qila (1995)

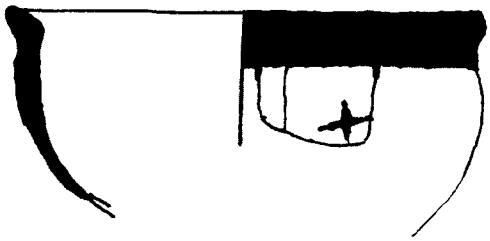


Fig 10, BL-16

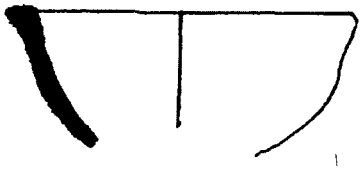


Fig 11, BL-30a

Type: Basin(FIG 2)

After Gaur, Atranjikhera (1983)

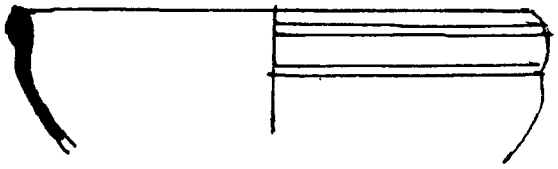


Fig 11, BN-16

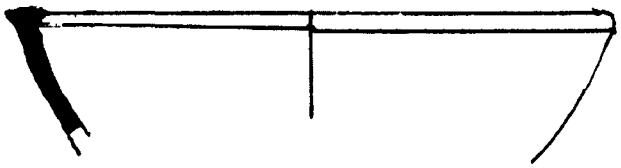


Fig 11, BN- 19

After Gaur, Lal Qila (1995)

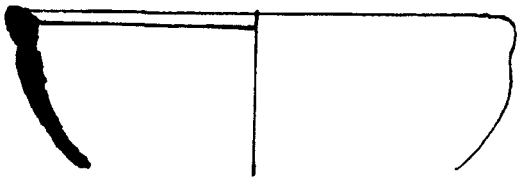


Fig 16, BN- 6

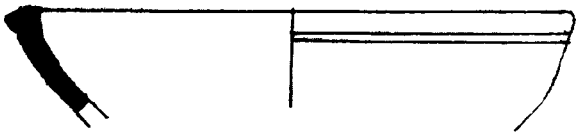


Fig 18, BN-21

Type: Jar (FIG 3)

After Gaur, Lal Qila (1995)

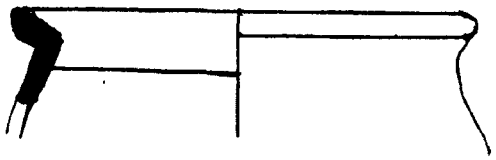


Fig 14, j-13

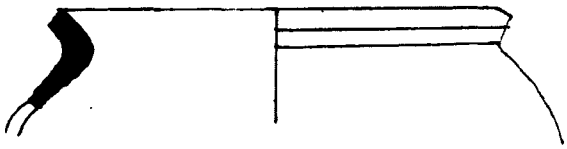


Fig 14, j-5a

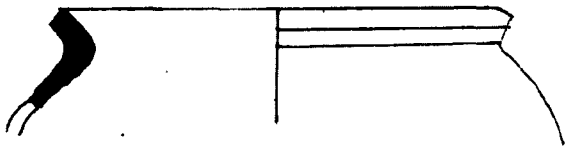


Fig 14, j-5a

After Gaur, Atranjikhera (1983)

Fig 25, j-15

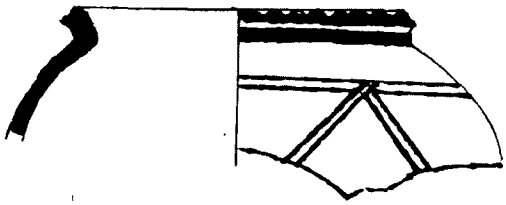
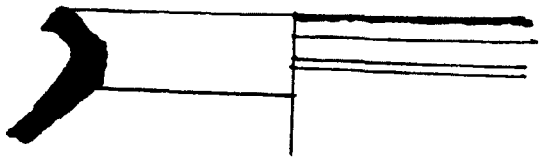
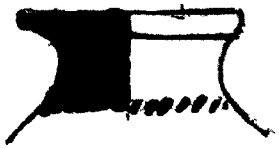


Fig 25, j-16



j-22a

Type: Lid (FIG 4)

After Gaur, Atranjikhera (1983)	After Gaur, Lal Qila (1995)
	
Fig 9, L-6	Fig 15, L-13b
	
Fig 9, L-2	Fig 15, L-1

Type: Vase (FIG 5)

After Gaur, Atranjikhera (1983)

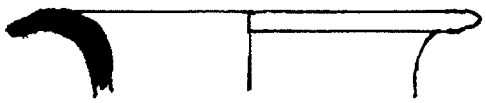


Fig 15, V-9

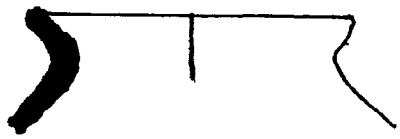


Fig 17, VL-15

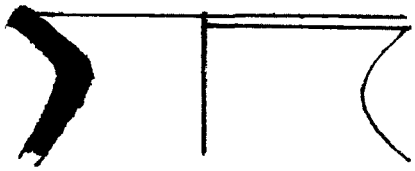


Fig 15, V-15

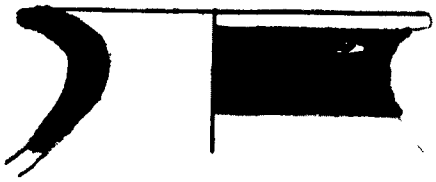


Fig 15, V-12

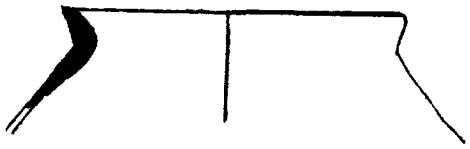


Fig 17, Vl-21a

After Gaur, Lal Qila (1995)

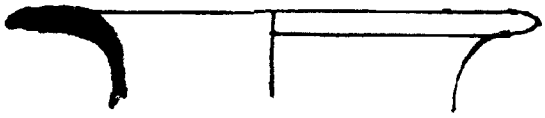


Fig 28, V-39

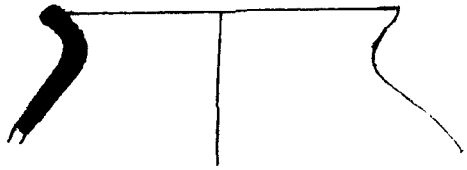


Fig 28, V-44

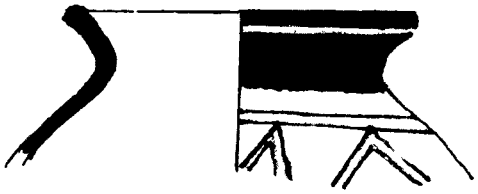


Fig 27, V-33

Fig 26, V-1

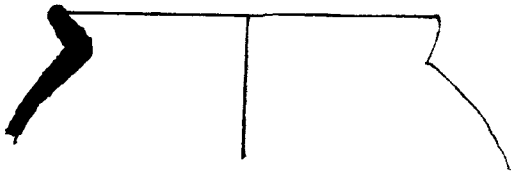


Fig 27, V-21

Type: Vase (FIG 5)

After Gaur, Atranjikhera (1983)

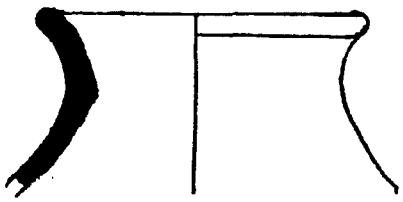


Fig 15, V-19a

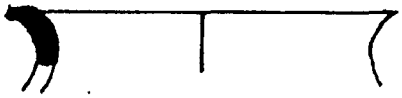


Fig 15, VL-14

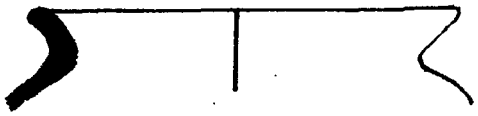


Fig 15, VL-15

After Gaur, Lal Qila (1995)

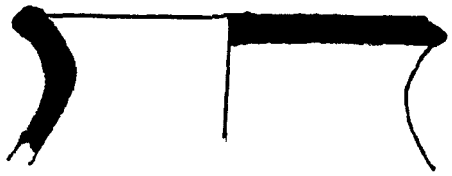


Fig 30 V-99

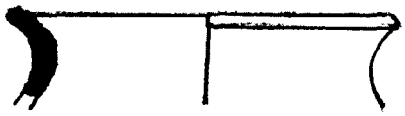


Fig 30, V-99a

Fig 28, V-44

Type: Miniature pot (FIG 2)

After Gaur, Atranjikhera (1983)

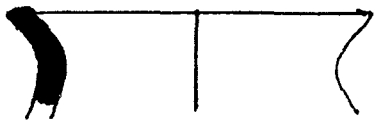


Fig 18, MP-4

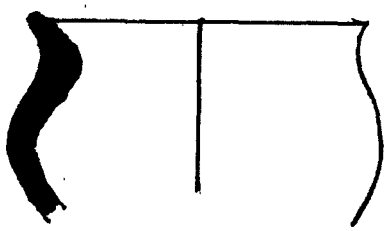


Fig 18, MP-6

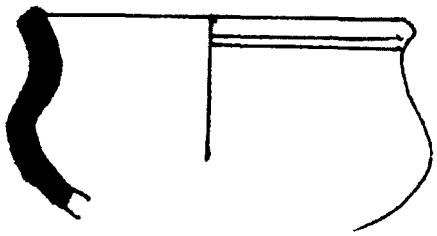


Fig 18, MP-5

After Gaur, Lal Qila (1995)

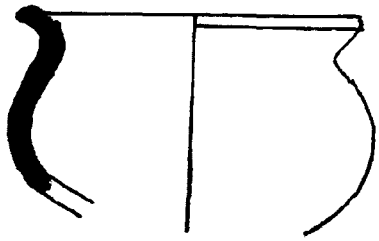


Fig 34, MP-6

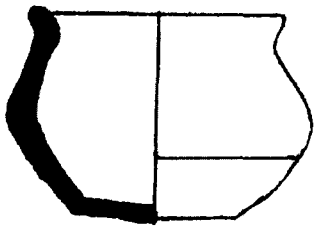


Fig 34, MP-3

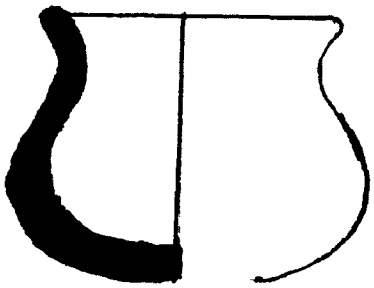
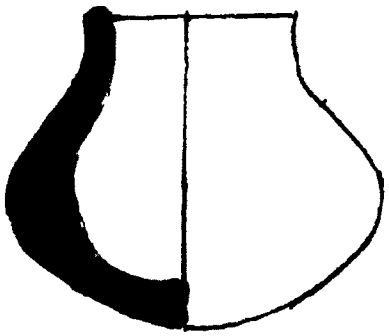
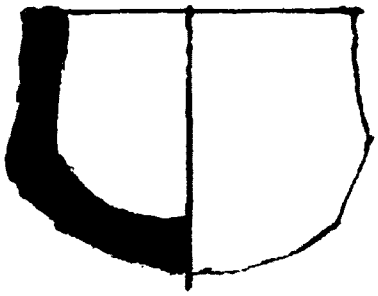
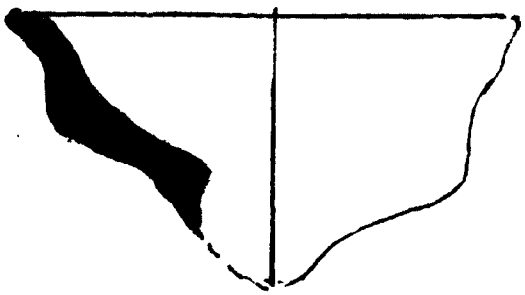


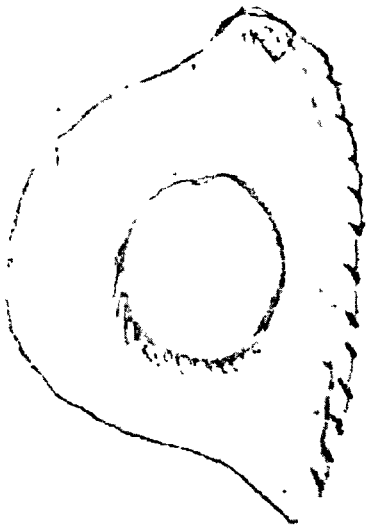
Fig 34, MP-8

Type: Ritualistic pot(FIG 7)

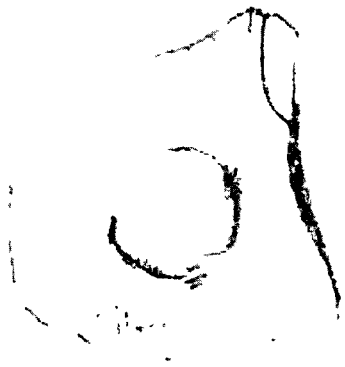
After Gaur, Atranjikhera (1983)	After Gaur, Lal Qila (1995)
ABSENT	 Fig 35, RT-4a  Fig 35, RT-6  Fig 35, RT-12

Type: Handle (FIG 8)

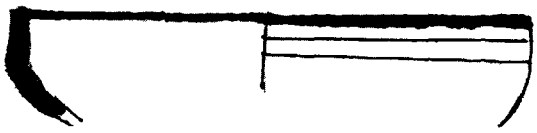
After Gaur, Atranjikhera (1983)



After Gaur, Lal Qila (1995)



Type: Dish(FIG 9)

After Gaur, Atranjikhera (1983)	After Gaur, Lal Qila (1995)
ABSENT	 Fig 22, D-1  Fig 22, D-3

Type: Trough (FIG 10)

After Gaur, Atranjikhera (1983)	After Gaur, Lal Qila (1995)

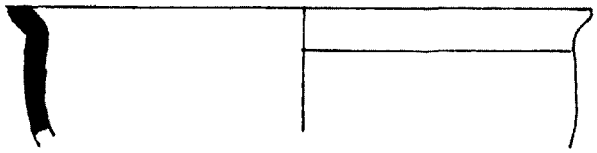
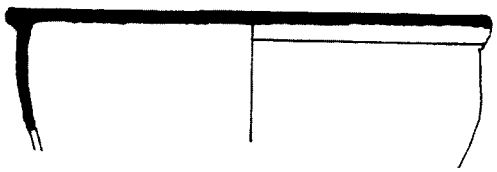
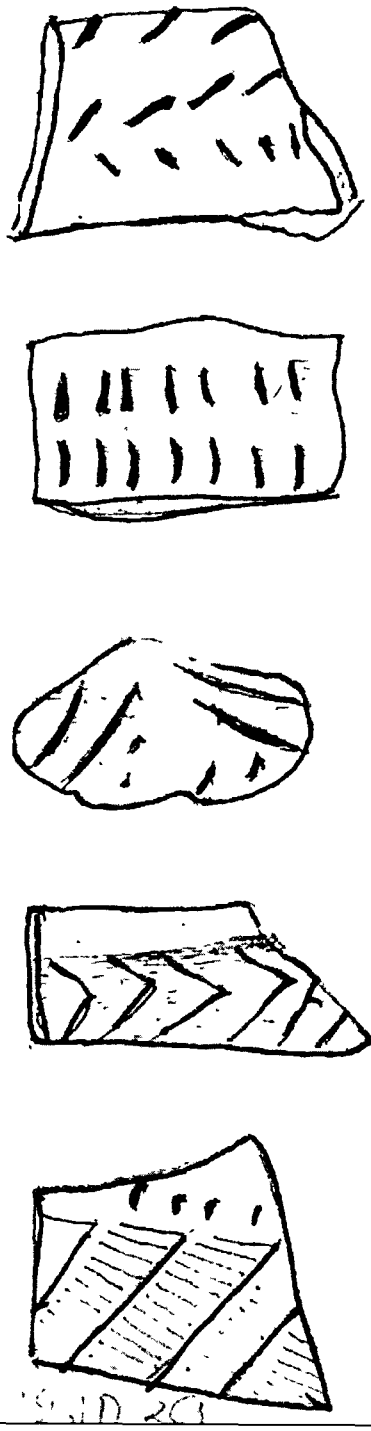

	

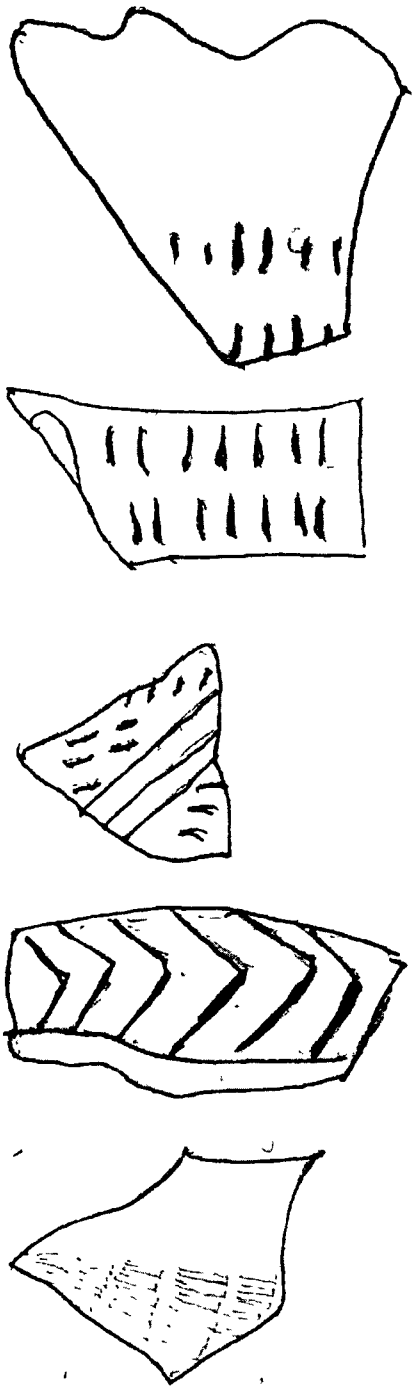
Fig 12, t-5	Fig 21, t-1

Incised Design (FIG 11)

After Gaur, Atranjikhera (1983)

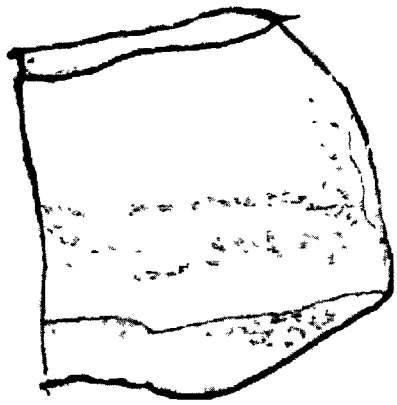


After Gaur, Lal Qila (1995)

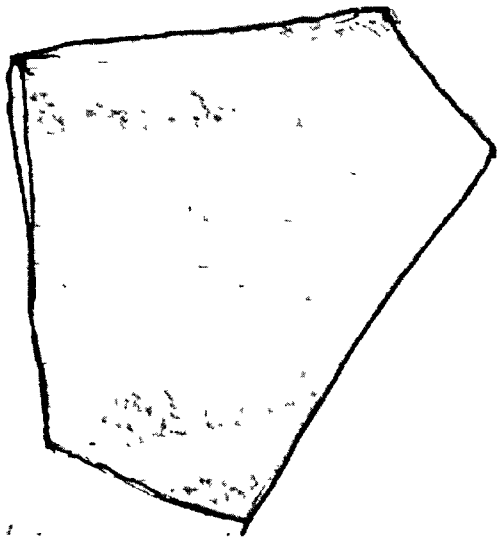


Wavy lines (FIG 12)

After Gaur, Atranjikhera (1983)



After Gaur, Lal Qila (1995)



Type: Jar (FIG 1)

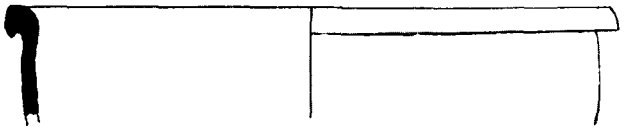
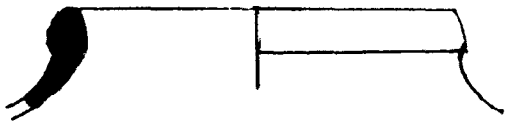
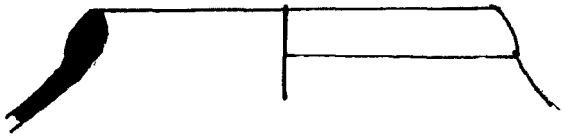
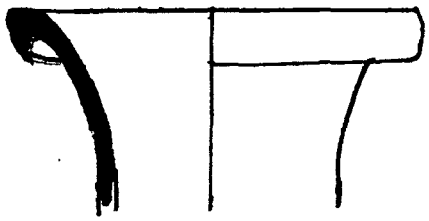
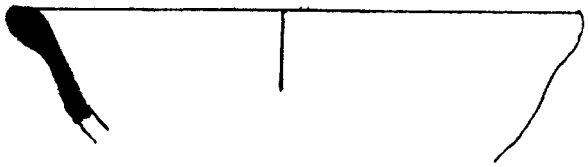
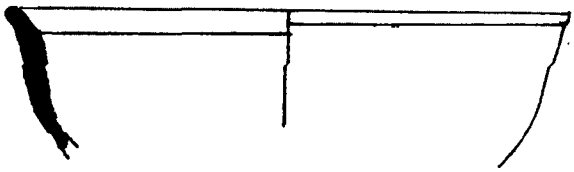
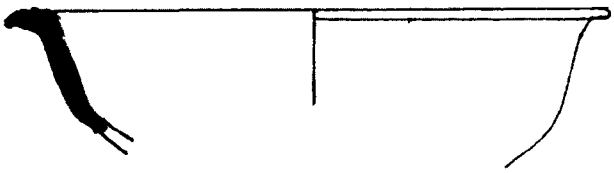
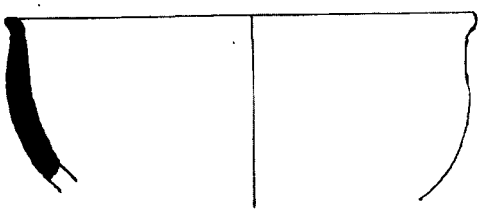
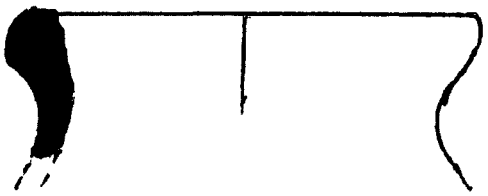
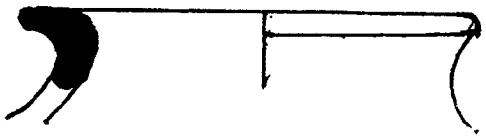
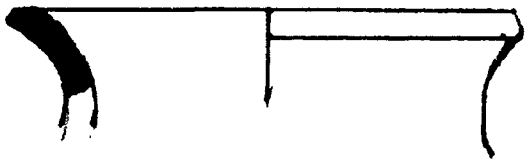
After Joshi, Bhagwanpura (1993)	After Gaur, Atranjikhera (1983)
 Fig 9, 1	
 Fig 9, 5	Absent
 Fig 13, 31	
 Fig 13, 33	
 Fig 15, 44	

Fig 1

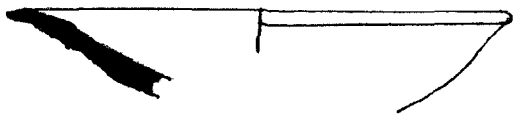
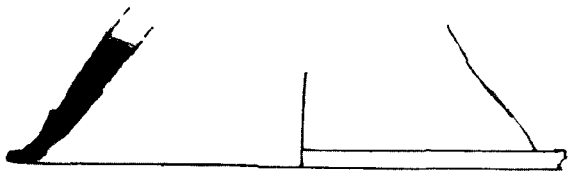
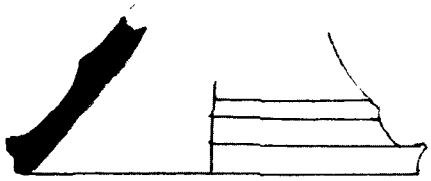
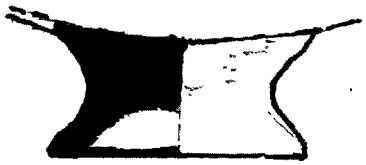
Type: Basin (FIG 2)

After Joshi, Bhagwanpura (1993)	After Gaur, Atranjikhera (1983)
ABSENT	 Fig 10, BN-5  Fig 10, BN-2a  Fig 11, BN-11  Fig 11, BN- 14

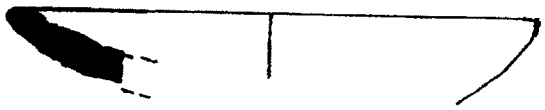
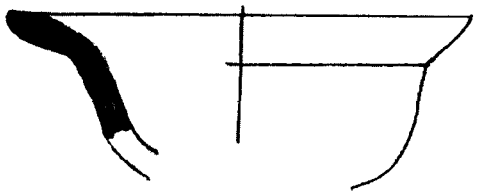
Type: Miniature Pot (FIG 3)

After Joshi, Bhagwanpura (1993)	After Gaur, Atranjikhera (1983)
ABSENT	 Fig 18, MP-1  Fig 18, MP-2  Fig 18, MP-4a

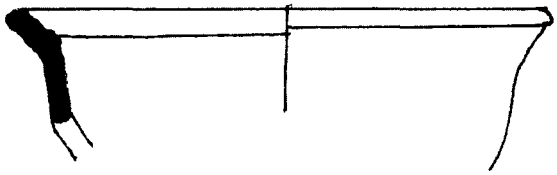
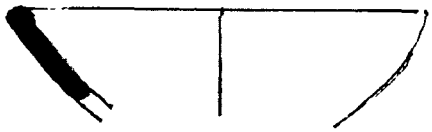
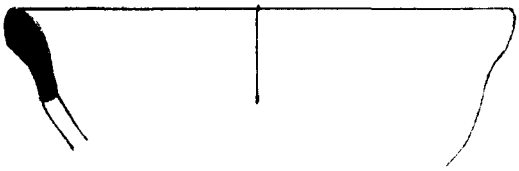
Type: Dish-on-stand (FIG 4)

After Joshi, Bhagwanpura (1993)	After Gaur, Atranjikhera (1983)
ABSENT	 Fig 13, DS-1a  Fig 13, DS-6  Fig 13, DS-8  Fig 13, DS-10

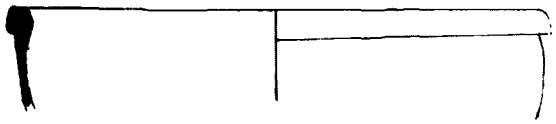
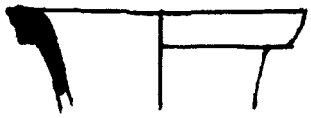
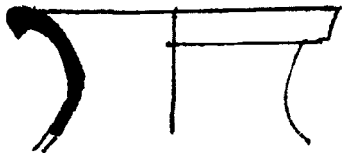
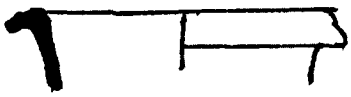
Type: Lid (FIG 5)

After Joshi, Bhagwanpura (1993)	After Gaur, Atranjikhera (1983)
ABSENT	 Fig 9, L-1  Fig 9, L-2  Fig 9, L-4  Fig 9, L-6  Fig 9, L-5

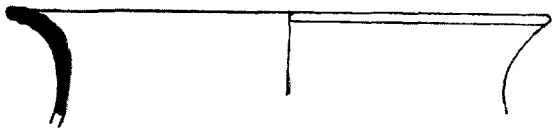
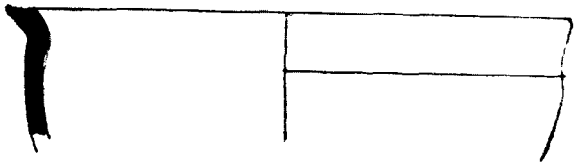
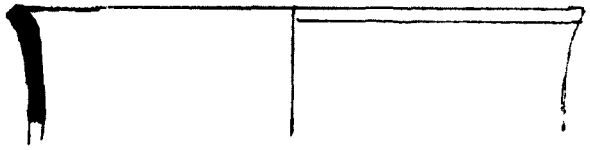
Type: Bow I (FIG 6)

After Joshi, Bhagwanpura (1993)	After Gaur, Atranjikhera (1983)
ABSENT	 Fig 7, B-1  Fig 7. B-10  Fig 8, B-21  Fig 8, B-16

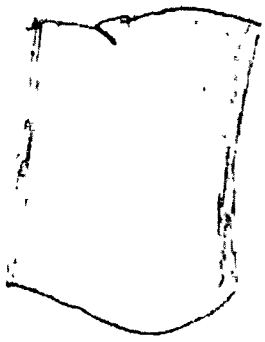
Type: Vase (FIG 7)

After Joshi, Bhagwanpura (1993)	After Gaur, Atranjikhera (1983)
 Fig 9, 3	
 Fig 9, 4	ABSENT
 Fig 13, 8	
 Fig 13, 19	
 Fig 15, 12	

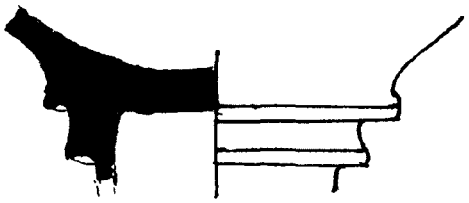
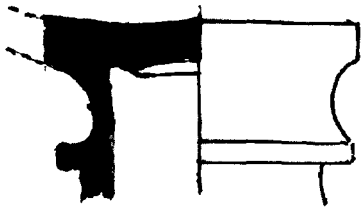
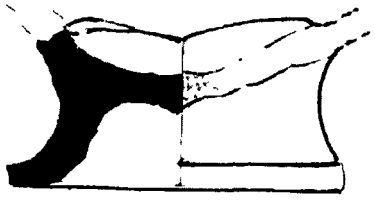
Type: Trough (FIG 8)

After Joshi, Bhagwanpura (1993)	After Gaur, Atranjikhera (1983)
ABSENT	 Fig 12, T-2  Fig 12, T-5  Fig 12, T-6

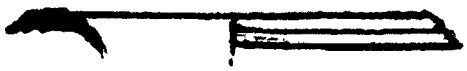
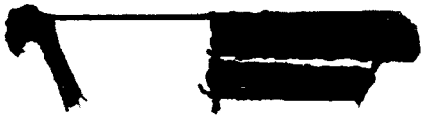
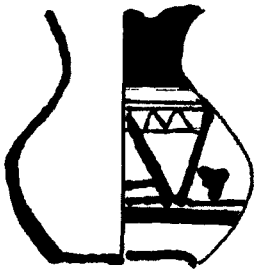
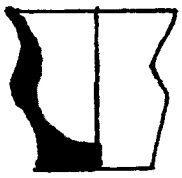
Type: Handle (FIG 9)

After Joshi, Bhagwanpura (1993)	After Gaur, Atranjikhera (1983)
ABSENT	 Fig 19, H-1  Fig 19, H-3  Fig 19, H-3b

Type: Dish-on-stand (FIG 1)

After Joshi, Bhagwanpura (1993)	After Gaur, Lal Qila (1995)
 Fig 14, 3	ABSENT
 Fig 14, 2	ABSENT
 Fig 14, 8	ABSENT
ABSENT	 Fig 37, BS-2c

Type: Miniature Pot (FIG 2)

After Joshi, Bhagwanpura (1993)	After Gaur, Lal Qila (1995)
 Fig 15, 8	
 Fig 15, 14	ABSENT
 Fig 15, 17	
 Fig 15, 28	
 Fig 10, 12	

Type: Basin (FIG 3)

After Joshi, Bhagwanpura (1993)

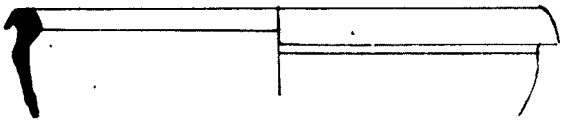


Fig 12, 1

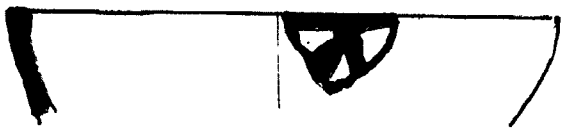


Fig 12, 8

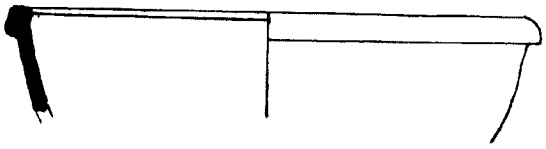


Fig 12, 5

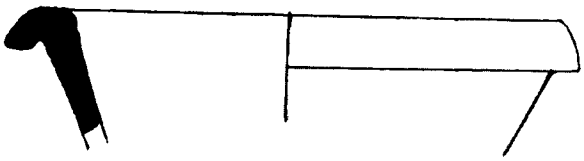


Fig 12, 7

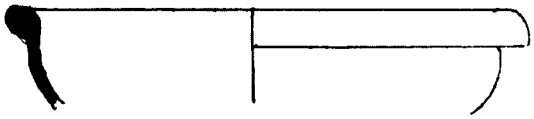


Fig 12, 11

After Gaur, Lal Qila (1995)

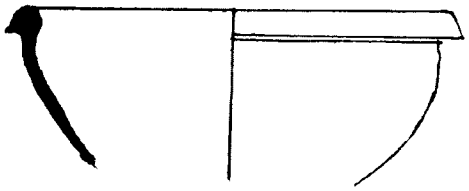


Fig 16, BN-9

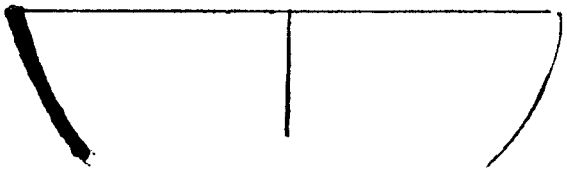
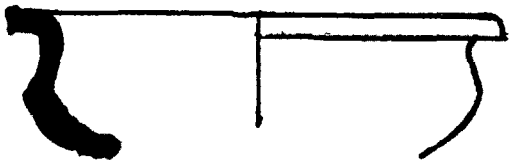
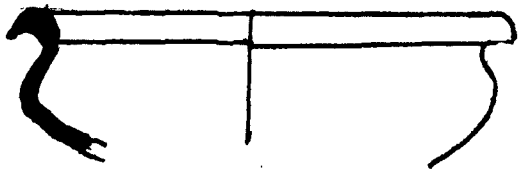
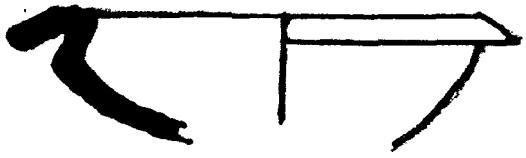
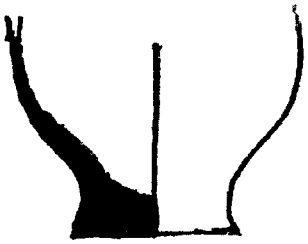
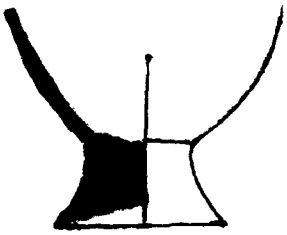
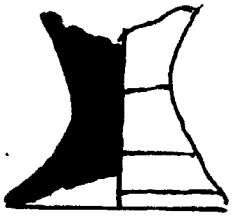
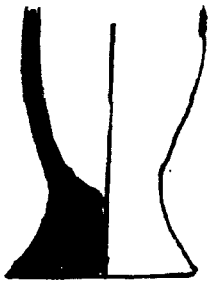


Fig 12, BN-29

Type: Bowl-cum-lid (FIG 4)

After Joshi, Bhagwanpura (1993)	After Gaur, Lal Qila (1995)
 Fig 10, 11	ABSENT
 Fig 10, 6	
 Fig 10, 33	

Type: Cup-on-stand (FIG 5)

After Joshi, Bhagwanpura (1993)	After Gaur, Lal Qila (1995)
 Fig 10, 15	
 Fig 10, 17	ABSENT
 Fig 10, 21	
 Fig 10, 35	

Type: Dish (FIG 6)

After Joshi, Bhagwanpura (1993)

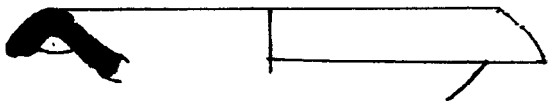


Fig 11, 17

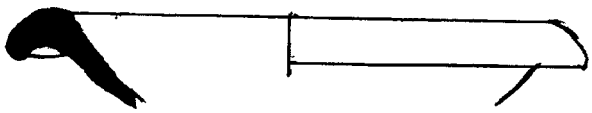


Fig 11, 18

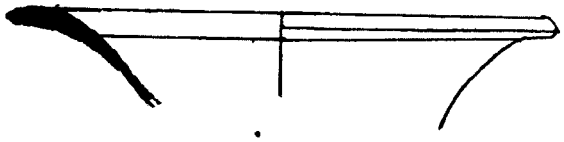


Fig 11, 21

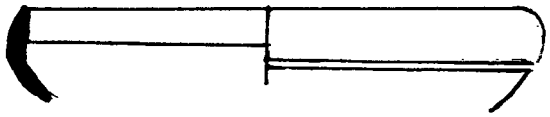


Fig 11, 12

After Gaur, Lal Qila (1995)

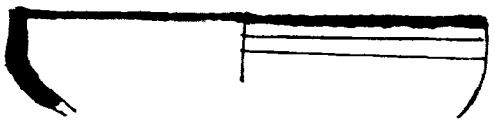


Fig 22, D-1

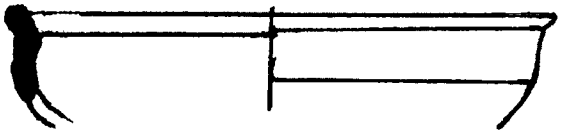
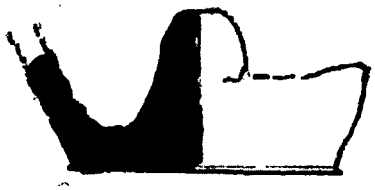
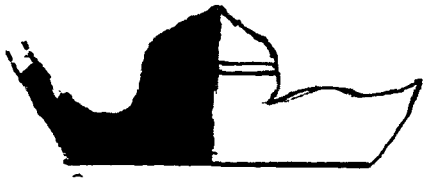
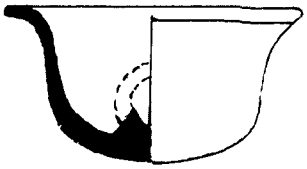
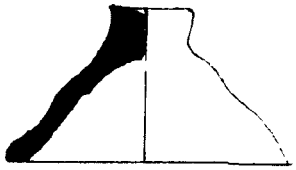
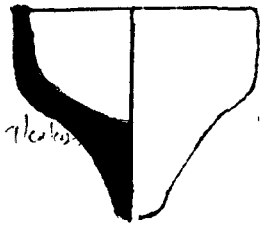
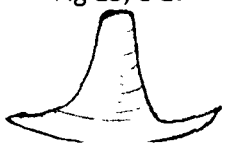
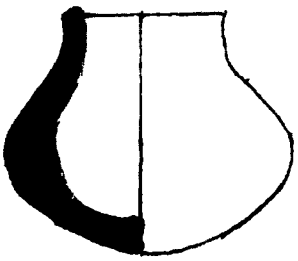
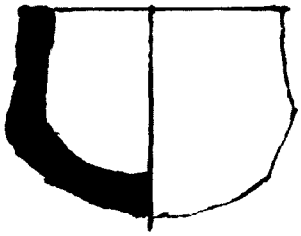
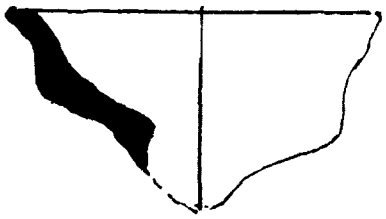


Fig 22, D-3

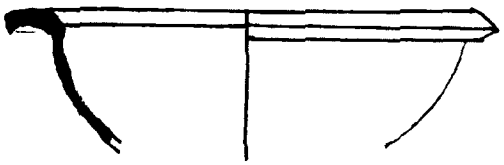
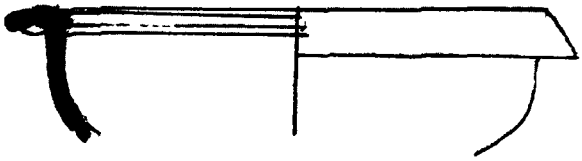
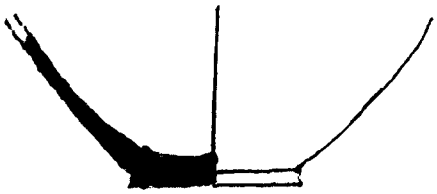
Type: Lid (FIG 7)

After Joshi, Bhagwanpura (1993)	After Gaur, Lal Qila (1995)
 Fig 15, 51	
 Fig 15, 40	
	 *Fig 15, L-8*
	 Fig 15, L-13
	 Fig 15, L-17
	 Fig 15, L-10

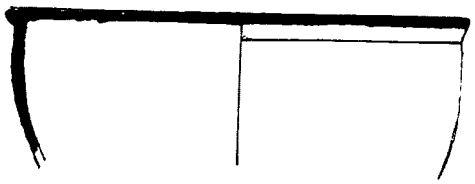
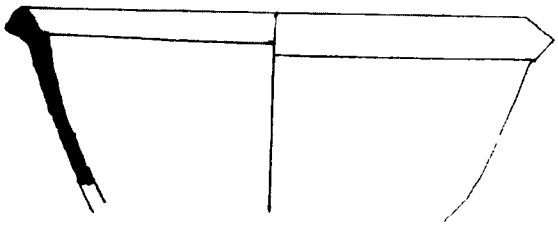
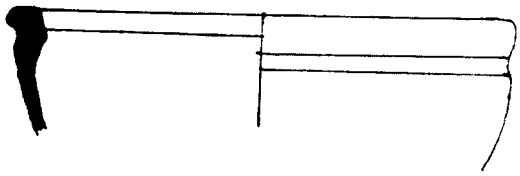
Type: Ritualistic Pot (FIG 8)

After Joshi, Bhagwanpura (1993)	After Gaur, Lal Qila (1995)
ABSENT	 Fig 35, RT-4a  Fig 35, RT-6  Fig 35, RT-12

Type: Bowl (FIG 9)

After Joshi, Bhagwanpura (1993)	After Gaur, Lal Qila (1995)
 Fig 10, 1	ABSENT
 Fig 10, 2	
 Fig 15, 23	

Type: Trough (FIG 10)

After Joshi, Bhagwanpura (1993)	After Gaur, Lal Qila (1995)
ABSENT	 Fig 21, T-1  Fig 21, T-4  Fig 21, T-5

Painting (FIG 11)

After Joshi, Bhagwanpura (1993)

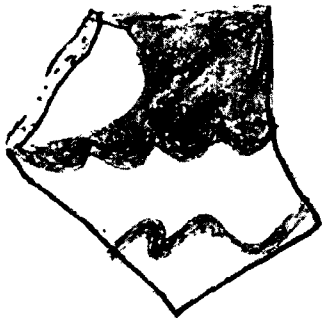


Fig 23, 1

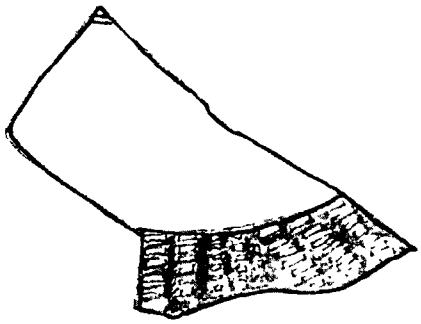


Fig 23, 3

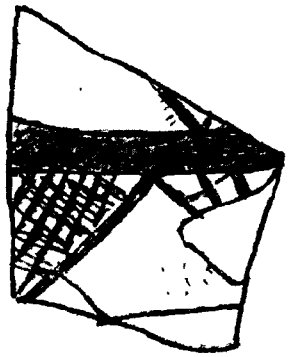


Fig 23,10

After Gaur, Lal Qila (1995)

Fig 46, PD-27

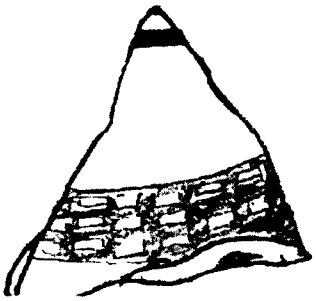


Fig 48,PD-49

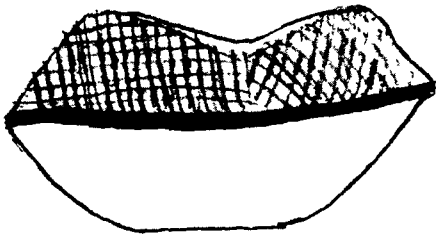


Fig 48,PD-47

Type- Incised design (FIG 12)

After Joshi, Bhagwanpura (1993)

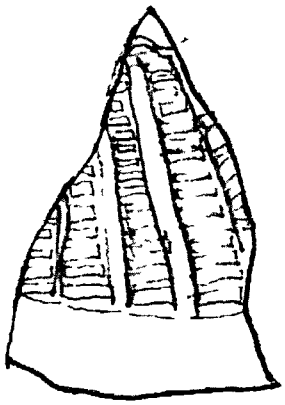


Fig 26, 4

After Gaur, Lal Qila (1995)

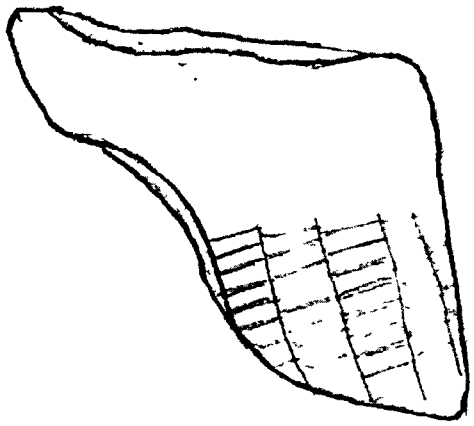
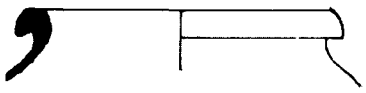
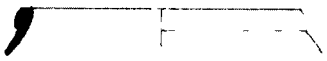
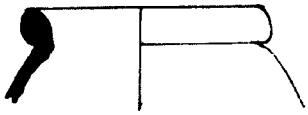
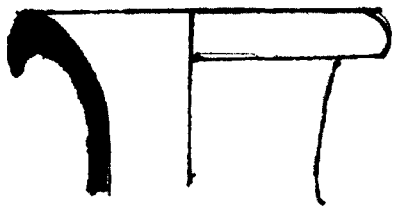
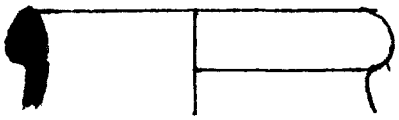
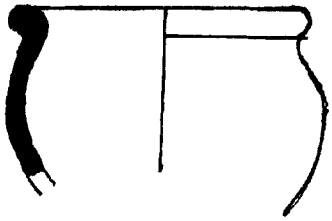
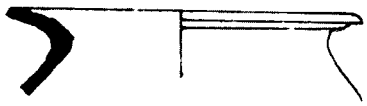


Fig 41, ID-36

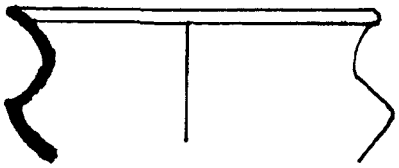
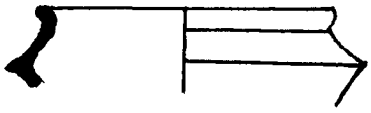
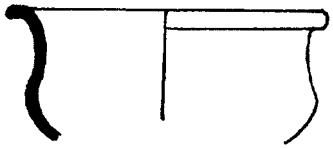
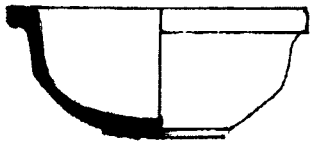
Type: Jar (FIG 1)

After Suraj Bhan Mitathal IIB (1975)	After Gaur, Atranjikhera (1983)	After Gaur,Lal Qila (1995)
 Fig 8, 1	 J-4	 J-10
 Fig 8, 7		
 Fig 8, 8		

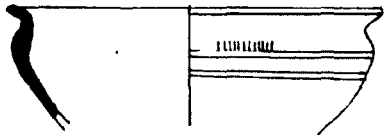
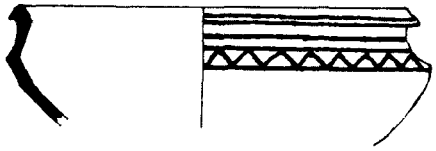
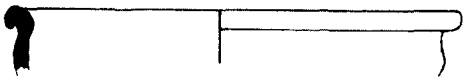
Type: Vase (Fig 2)

After Suraj BhanMitathal IIB (1975)	After Gaur, Atranjikhera (1983)	After Gaur,Lal Qila (1995)
 Fig 8, 17		
 Fig 8, 15		
 Fig 8, 10		
 Fig 9, 27	 Fig 16, vl-6	 Fig 26, v-3

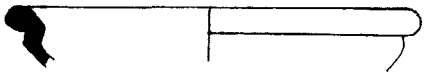
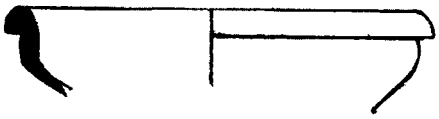
Type: Bowl (FIG 3)

Mitathal IIB (1975)	After Gaur, Atranjikhera (1983)	After Gaur,Lal Qila (1995)
 Fig 10, 62a		
 Fig 11, 67		
 Fig 11, 70		
 Fig 11, 71		

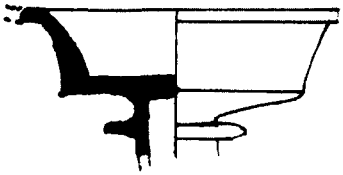
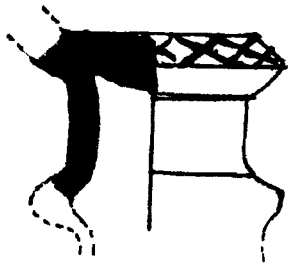
Type: Basin (FIG 4)

After Suraj Bhan Mitathal IIB (1975)	After Gaur, Atranjikhera (1983)	After Gaur,Lal Qila (1995)
 Fig 11, 73		 Fig 16, BN-2
 Fig 11, 76		
 Fig 11, 75		

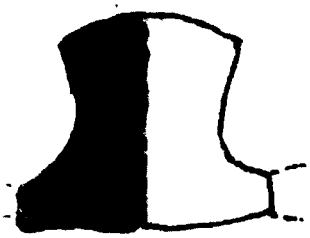
Type: Dish (FIG 5)

After Suraj BhanMitathal IIB (1975)	After Gaur, Atranjikhera (1983)	After Gaur,Lal Qila (1995)
 Fig 12, 79  Fig 12, 82  Fig 12,84		

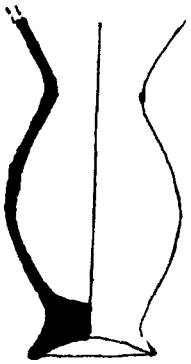
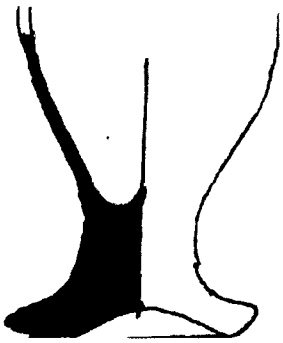
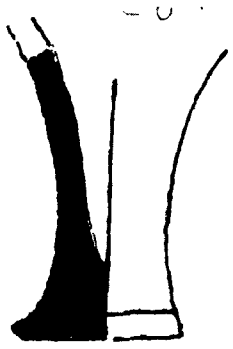
Type: Dish-on-stand (FIG 6)

After Suraj BhanMitathal IIB (1975)	After Gaur, Atranjikhera (1983)	After Gaur,Lal Qila (1995)
 Fig 12,88a  Fig 12, 89  Fig 13, 92  Fig 13, 93  Fig 13, 94		

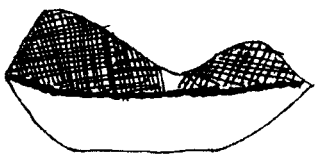
Type: Lid (FIG 7)

After Suraj BhanMitathal IIB (1975)	After Gaur, Atranjikhera (1983)	After Gaur,Lal Qila (1995))
 Fig 9, 42  Fig 9, 43  Fig 9, 41		

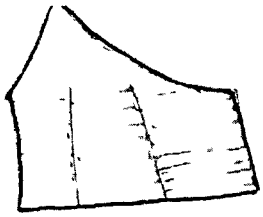
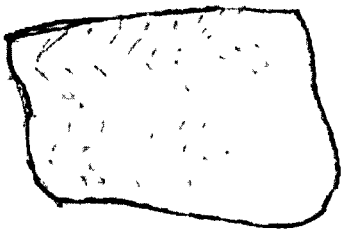
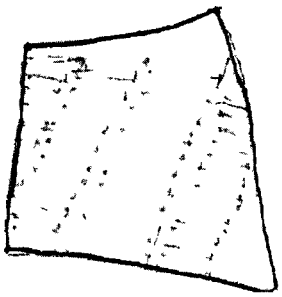
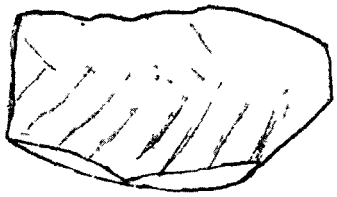
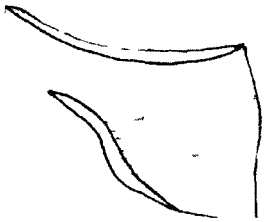
Type: Goblet (FIG 8)

After Suraj BhanMitathal IIB (1975)	After Gaur, Atranjikhera (1983)	After Gaur,Lal Qila (1995)
 Fig 9, 38  Fig 9, 39  Fig 9, 40		

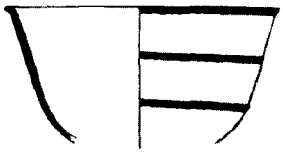
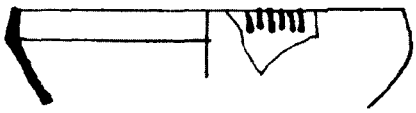
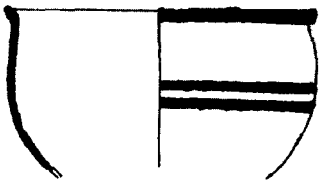
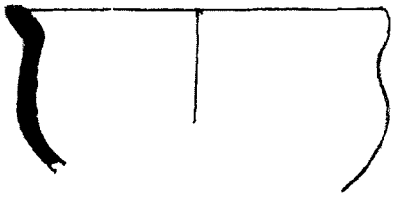
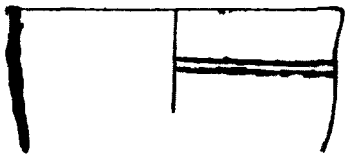
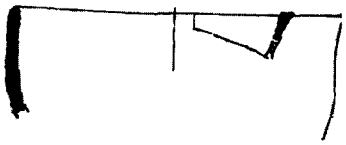
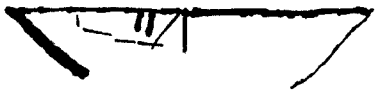
Paintings (FIG 9)

After Suraj BhanMitathal IIB (1975)	After Gaur, Atranjikhera (1983)	After Gaur,Lal Qila (1995)
		

Incised Design (FIG 10)

After Suraj Bhan Mitathal IIB (1975)	After Gaur, Atranjikhera (1983)	After Gaur,Lal Qila (1995)
 	 	 

Type: Bowl (FIG 1)

After Bala, Sothi (2003)	After Gaur,Lal Qila (1995)	After Gaur,Atranjikhera (1983)
 Fig 35, 15		
 Fig 35, 18		
 Fig 35, 4	 Fig 10, BL-3a	 Fig 8, B-27
 Fig 35, 2	 Fig 12, BL-50	
 Fig 34, 36		 Fig 7, B-11

CHAPTER IV

Artefact Analysis: A Relook

One needs to study material assemblages in order to establish an affinity between one culture and another culture or to designate different sites as the part of the same culture. Ceramic industries play a vital role in deciding the affiliation between two or more sites. However, other than ceramic industries, artifacts serve as important tools helping to establish relations between sites and henceforth, among cultures as a whole.

David Clark (1968: 136) states that the term 'attribute' applies to those elemental components of artifacts which roughly equate with elements of human activity. Sometimes the attribute as in case of stone tools may be the result of a single action—a single hammer blow or sometimes the attribute results from multiple repetitions of a single action, such as pressure flaking. It appears that for Clark (1968: 138) the attribute or set of attributes embody the humanly imposed modifications that turn a natural object into an artifact. These attributes may be treated as entities although they cannot exist by themselves, but only as elements combined to form an artifact.

The behavioural attributes of artifacts refers to whether they are specific or contextual, natural or artificial (Clark 1968: 138) The specific attributes refer to physical qualities of an artefact's stratigraphic and geographic location and associations. A behavioural attribute can be imposed as much by the careful

selection of natural raw material as by direct human alteration. The preferential selection of certain limited pebble sizes, shapes and the material preservation of the natural context on the butts of some of these tools, all reflect human behaviour but themselves remain natural features.

The attributes should use independent variables. For example, when analyzing the decorative art styles of pottery, metalwork or other materials one must be careful to separate the essential motif attributes from other attributes noting that two different art styles might well have a similar range of motifs (Clark 1968: 139)

Artefacts are defined by Clark (1968: 141) as any object modified by a set of humanly imposed attributes. Every artifact, and in fact, every natural object, contains an infinity of attributes or variables and therefore of possible systems networking these attributes. Artefact-types have been described by Clark (1968: 189) that artifacts intended for a specific usage: projectile points, axes, swords, burins. It has also been suggested that the concept of an artifact type often coincides with a group of artifacts sharing a common purpose.

According to Clark (1968: 385) an assemblage may be defined as an associated set of contemporary artifact-types. The important aspect of an assemblage under this definition is that the artefacts may belong to more than one type and that they occur together in definite contemporary association with one another. Assemblages occur dispersed over geographical areas and these areas can

be defined by limits if assemblages containing specific types are mapped (Clark 1968: 231).

In turn, culture is the ultimate goal to reach for artefact comparative analysis so as to be able to identify artifact types and assemblages as part of the same culture. According to Clark (1968: 231) a study of particular assemblages from particular areas of space and time bring us into contact with another entity, the 'culture'. An archaeological culture or cultural assemblage is expressed by a set of specific artefact types and represented by a group assemblage containing some of these artefacts types. The component assemblages must come from a limited, defined continuous geographical area and a limited, defined and continuous period of time.

The basis of Clark's description about the culture concept is to ascertain the affinity among the cultures. Attributes are given much emphasis in order to have prominent evidence about people's mental and creative thought. However, the attribute is also the prime unit of constructing culture and eventually establishing an association with other cultures like its surface attributes, shape attributes, technological attributes etc. For Childe (1929) artifacts could be separated into those which were resistant to change, which reflected that the artifacts are made by the people based on two ethnic groups, such as pottery while others were less resistant to change such as tools.

Thus, in order to identify a particular culture based on material remains and to ascertain whether there is an affinity with other contemporary or earlier or later

cultures, it is necessary to study the details of the artefactual remains. Moreover, it is also important to keep in mind that one should be very cautious while comparing artefacts from one site to another site so that exchange or trade items should be negated from the assemblages.

In the previous chapter, we have studied and compared the ceramics from OCP sites like Lal Qila and Atranjikhera, to assess the degree of similarity and dissimilarity between these sites. However, one should not assume that a site is marked only by one category of artefact, in this case, ceramics. A site's assemblage should comprise all the bodies of artifacts and artefact-types ranging from ceramics to tools and ornaments. In turn, we are interested in ascertaining whether there is an OCP culture even if we look at sites like Lal Qila, Atranjikhera and Daulatpur. Artefact-types in a 'culture' should reflect most spheres of human activity. All too often, archaeologists have focused only on pottery while discussing the OCP. In this chapter, we will look at the artefacts found from the OCP sites of Lal Qila, Atranjikhera and Daulatpur. We will also compare the artefacts found from these two sites with artifacts from Mitathal IIB and Bhagwanpur IA which are Late Harappan.

Lal Qila is considered to be a single culture OCP site and a prominent habitational site. On the other hand Atranjikhera is a multi-cultural site with its earliest occupation from the OCP period. Yet, another site is Daulatpur in Bulandshahr District, which the excavator considered as a camp site of the OCP people.

Broadly, apart from pottery, the assemblage of Lal Qila has been divided into four categories based on raw material:

I. Terracotta objects

II. Stone objects

II. Bone Objects

IV. Copper objects

In contrast, according to the raw materials out of which artifacts were made, categories of artifacts have been illustrated from Atranjikhera and Daulatpur.

I. Terracotta objects

II. Stone objects

From Bhagwanpura IA and Mitathal IIB, several aretefact-types were found of varying raw material. These have been discussed and compared with similar categories of artifacts from the OCP sites.

TERRACOTTA ARTEFACTS:

Type: Human Figurines

The Lal Qila report illustrated two anthropomorphs (PL. IA) with one of them showing stumpy stretched hands and legs. Both of them have two pin-holes at the top probably for fixing a metal wire of copper to attach the head. The front part of the body of one figurine has two rows of three holes each. The body is well-baked and treated with a red wash. Its maximum height and breath are both 5.7 cm. Another fragmentary anthropomorph (PL. IB) recovered from the same

site consists of one leg and one hand. Its height is about 6 cm and width is 6.5 cm (Gaur 1995: 159). Anthropomorphs have not been found either from Atranjikhera or from Daulatpura. However, the Bhagwanpura excavation yielded three terracotta anthropomorphs, which are badly fragmented. These differ from the Lal Qila specimen. Only the upper portion is left, with one arm missing, another broken and these are hand made and crude in form (Joshi 1993: 126). From Mitathal IIB no human figurines were found.

Among human terracotta figurines from Lal Qila, only a female (PL. IC) form has been illustrated in the report. The characteristic features include an oval shaped face, a short forehead; eyes are shown big or bulging with slight depressions denoting pupils. It has strong jaw with protruding lips. The noteworthy feature is that each shoulder has a hole for attaching arms. It has prominent straight breasts with pointed nipples. The rest of the body below the waist is broken. Its maximum height is 6.5 cm (Gaur 1995: 160). Another human figurine possibly female (PL. ID) was recovered with features similar to the previous one, but it is damaged. Its maximum height is about 7.2 cm (Gaur 1995: 161). Human figurines are not reported from Daulatpur, Atranjikhera, Mitathal IIB and Bhagwanpura IA.

Type: Animal Figurines

Animal terracotta figurines (PL. IIA) are also recovered from Lal Qila. One example represents a bull with elongated slit mouth and a raised hump. Half of the hump, ears, and horn are missing. Another fragmentary specimen possibly

represents a dog. This specimen does not have mouth, ears, and back portion. Its length is approx. 3.6 cm (Gaur 1995: 161). Two indeterminate fragments also have been recovered, which are probably portions of an animal's hind legs and fore legs respectively. In both cases it is impossible to identify the animal on the basis of only the legs.

The Atranjikhera excavation yielded not a single animal figurine. But from Daulatpur were recovered two animal terracotta figurines of ram (PL. IIB) and dog (PL. IIC). Both the specimens are badly broken. The maximum ratios of lengths and heights of both the specimens are 3.8 cm: 2.8 cm and 5 cm: 3.8 cm respectively.

From Mitathal IIB, four terracotta animal figurines of bull or ram were found. According to Suraj Bhan (1975: 66) these terracotta toys have more resemblances with that from Bargaon and Alamgirpur than with those from Lal Qila and Daulatpur. Their maximum lengths are 6.6 cm, 3.8 cm, and 5.5cm respectively. Size of the fourth one is not illustrated (Suraj Bhan 1975: 67). From Bhagwanpura, a total number of thirty-five animal and bird figurines have been unearthed. All the figurines are hand made. The excavated animal figurines that have been illustrated is an almost complete figurine of a bull in terracotta. Two bulls have been illustrated in the Bhagwanpura report one which of has a prominent pinched hump with left horn damaged and both hind legs missing.

In comparison to Lal Qila's animal figurines, animal figurines of Bhagwanpura are more intact (Joshi 1993: 127-128). Another figurine of a bull in

which only head portion is extant has been illustrated; it has prominent horns with a stylized face. An analysis of the various animal figurines has revealed that bulls were popular in period IA of Bhagwanpura, bull terracotta figurines are stylized and have long horns.

Two terracotta bird specimens (PL. IID) have been recovered from Lal Qila. Birds have been shown with curved top and slight projection in the central lower part. According to Gaur (1995: 161-62) there are two perforations at the lower part for fixing an artificial wheel attached to reed or copper wire. Four perforations are seen at the body, perhaps for decorative purposes. Other features of the bird like head, beak, and eyes are absent. Its height is 3 cm and length 6.4 cm (Gaur 1995: 161-62). Another bird of which only the head portion is extant, with two holes at the one end of the face to show its eyes and nostril. Beak is also recognizable. It is of an unslipped dull red colour (Gaur 1995: 162). These terracotta bird figurines may be for children to play. Terracotta bird like figurines are absent from Atranjikhera and Daulatpur. Mitathal IIB and Bhagwanpura IA also do not report terracotta birds.

Besides these terracotta figurines, numerous other items of terracotta have been recovered from Lal Qila such as wheels, bangles, pottery disc, ear stud, sling balls, tablets, gamesmen, crucibles, stamp, beads etc. In contrast to the large number of such artefacts from Lal Qila. Atranjikhera and Daulatpur show very limited artefacts and the same goes for Mitathal IIB and Bhagwanpur IA.

Type: Sling Ball

Lal Qila yielded two spherical solid pieces of sling balls (PL. IIIA) which are crudely modelled. Both the specimens are of different sizes. The first specimen is more or less completely spherical with a diameter of 6.5 cm (Gaur 1995: 166). It is not smooth and has some marks of blackish spots over the body. Another is oblong in shape with a diameter of 5.7 cm. It is also not smooth and has similar blackish spots over the entire body (Gaur 1995: 166). A sling ball recovered from Atranjikhera is a slightly oblong irregularly shaped with rough surface (Gaur 1983: 69). Daulatpur excavation too has not yielded any sling ball. Sling balls as an artifact is absent from Mitathal IIB and Bhagwanpura IA.

Type: Pottery Disc

Lal Qila yielded a total number of twelve pottery discs. These terracotta pottery discs are of rough circular shape. Their shapes as well as sizes differ in diameter ranging from 4 cm to 5.4 cm. These discs seem to have been made out of broken pieces of pottery and most probably are meant as playing things for children. Although these discs do not follow standard shapes and sizes, they appear roughly like pentagon, hexagon, octagon, and so forth (Gaur 1995: 167). Atranjikhera yielded a perforated terracotta pottery disc, circular with a diameter of 7.2 cm (Gaur 1983). None of the terracotta discs from Lal Qila show perforations as those from Atranjikhara.

Another pottery disc found from Atranjikhera, smaller in comparison to the first one, appears in square form with sides 4.5 cm (Gaur 1983: 69). Some of four

or five terracotta discs have been found from Daulatpur. These have similarities with those from Lal Qila in terms of fabric and shapes. Daulatpur discs (PL. III B,B1,B2,B3,B4) are greyish except for two discs which are of ochreous fabric. The edges of the discs are completely round. The diameters of the discs are respectively 5.4 cm, 4.5 cm, 4.9 cm, and 2.6 cm. A terracotta disc has been reported from Mitathal IIB. It is a flat disc of red ware with an oxidized smoky core, bearing finger marks, pressed on both the central portion of the surface. It is also decorated with nail designs all over the surface. This is totally different than the Lal Qila and Daulatpur pottery discs (Suraj Bhan 1975: 70). Pottery discs are absent from Bhagwanpura IA.

Type: Terracotta Stamp

One broken circular stamp (PL. IVA) with diameter 2.6 cm has been illustrated in the Lal Qila report. It has a decorative motif, depicting a stalk with leaves. It may have been used for impressing a design to mark authenticity on the pottery, or it might have belonged to a private owner. Its outer side is tapered having a depression at top for pressing it with a finger for producing a good impression. The diameter of the stamp is 3.2 cm of dull red colour (Gaur 1995: 167). This find is extremely important as such an artefact has not been found in any of other OCP culture. This type of specimen is also absent from Bhagwanpura IA and Mitathal IIB.

Type: Terracotta Bead

Lal Qila has yielded a total number of twenty-five beads (PL. IVB,B1,B2). These are of various shapes and sizes like bicone, circular, lenticular circular, arecanut shaped, barrel-shaped, truncated short shaped, standard spherical vase shaped, flattish quadrangular, elliptical and squarish shaped. Out of the twenty-five specimens, ten are badly partially broken. Some of the beads are well baked but some are ill-baked. Beads are decorated with incised designs like vertical dashes all around between two grooved parallel lines. Star like carved designs with six-seven angular points have been found (Gaur 1995: 168).

Five and six terracotta beads [(PL. IVC) (PL. VC1, C2)] have been recovered from Daulatpur excavation. Most of the beads are greyish coloured except for one which is of ochreous fabric. These are both of ill-baked and well-baked specimens. Decorative motifs like incised designs are absent from the surface. Daulatpur beads are irregular, bicone circular shaped, flat circular round shaped, irregular short truncated shaped and so forth. Their sizes range from 1.3 cm to 3.8 cm. Terracotta beads have not been recovered from Atranjikhera excavation. From Mitathal IIB a total number of thirty-four beads were found out of which seventeen are made of terracotta. The shapes of the beads are long barrel circular, short barrel circular, cylindrical circular, disc circular and oblate-circular. Some of the beads are decorated with trefoil design a characteristic Harappan pottery. Their maximum diameter ranges from 0.5 cm to 1.5 cm only (Suraj Bhan 1975: 75).

Bhagwanpura reported a total number of twenty-five beads out of which twenty beads are of terracotta. The varying shapes included bicone circular, ling bicone truncated, ghatta shaped, cylindrical tubular, long circular cylindrical etc. However, only a single bead has been described in the report (Joshi 1993: 124).

Type: Terracotta wheel

Lal Qila excavation yielded a total number of fourteen terracotta wheels (PL. VD). Some of the wheels are PL.ain and decorated with pin-holes and others have oblique notches as incised designs. These wheels are dull red, unslipped, unbaked, while some of the terracotta wheels have well-finished. Some of the wheels have hubs on one side and some have double convex section. Those wheels in which hub are projected on one side might also have been used as spindle whorls. Their diameter varies from 6 cm to 8 cm (Gaur 1995: 162).

Terracotta wheels have not been recovered from Atranjikhera. Daulatpur yielded two terracotta wheels (PL. VE,E1) both of which are broken. One of the ochreous coloured wheels is badly broken with only a fourth part left but has been identified as a perforated one. Another wheel is ill-fired, unbaked grayish with only a half portion left, decorated with nail incised design. Sizes of both these wheels are 7 cm and 5.5 cm in diameter respectively. From Bhagwanpura IA only three hand made terracotta wheels were recovered. These wheels have prominent and fragmentary hubs, and were plano-convex in shape. Wheels of Bhagwanpura IA differ from those of Lal Qila and Daulatpur, due to the decoration on the former. Two of the wheels differ in sizes being 8.2 cm and 14.3 cm in diameter

and 2 cm and 2.3 cm in thickness respectively (Joshi 1993: 132). A total number of twenty terracotta wheels have been recovered from Mitathal IIB which are hubbed and unslipped. The characteristic feature about these wheels is that they are made of dull red ware. One of the wheels sizes has been reported to be 5.4 cm in diameter. Suraj Bhan (1975: 68).

Type: Terracotta Bangle

Excavation at Lal Qila yielded a total number of twenty-seven fragments of terracotta bangles (PL. VF). Their fabrics are either fine or medium and they are found in different shades of red and grey in colour. A few of them are decorated with incised notches and dashes. These are found mostly in dull red ware and some of them have fine grayish colour. Bangles are divided into four parts on the basis of the section.

I. Bangles with triangular section

II. Bangles with circular section

III. Bangles with rectangular section

IV. Bangles with plano-convex section.

Most of the bangles are slipped and some are dull red or ochreous. Their diameters range from 4 cm to 6 cm (Gaur 1995: 163-65). Bangles have not been recovered from Atranjikhera and Daulatpura.

Large numbers of bangles have been recovered from Mitathal IIB, largely of faience and some of terracotta and shell. Around 137 Bangles are faience made and two badly recovered shell bangles but figure of terracotta bangles are not

reported. Their shapes comprised of rectangular section, flattish section, plano-convex section, circular section, triangular section, heart-shaped square section etc. The bangles of this period are invariably decorated with varieties of incised designs, such as horizontal or oblique grooves, concentric circles, chevrons, opposed triangles, cross-hatched designs, oblique strokes meeting at apex, etc.One of the bangles is circular shaped decorated with dots of black painting on the surface (Suraj Bhan 1975: 76). Bhagwanpura IA yielded total number of twenty-four terracotta bangles and faience bangles, out of which only three are terracotta made and the rest of faience. At Bhagwanpura just like Mitathal IIB, bangles were largely faience made.

Type: Terracotta Ball

A total number of eighteen modelled terracotta balls (PL. VIA) have been recovered from Lal Qila. These balls are plain and decorated. Varying decorated designs are found on the surface such as holes, vertical parallel notches, scratches etc. These balls were perhaps, most likely used by the children to hunt down birds or other small animals or may be used for Playing. The diameter of the balls ranges from 2 cm to 4.2 cm. It is possible that balls with diameter less than 2 cm may have been utilized as missile objects. Such kinds of terracotta balls are presently used by the village children as playing things (Gaur 1995: 165).

Atranjikhera report does not mention any terracotta balls, while Daulatpur yielded two terracotta balls (PL. VIB,B1). These balls have diameters 3.5 cm and 2 cm respectively and are undecorated.

From Mitathal IIB found one ball of terracotta and another of marble mentioned in the report without sizes (Suraj Bhan 1975: 70). From Bhagwanpura IA period a total number of seven balls were recovered. These are of different sizes and weights and are plain. One of the terracotta balls referred to in the Bhagwanpura report is of spherical shape with a diameter of 1.6 cm (Joshi 1993: 129-30). The difference between terracotta balls and sling ball of terracotta is mainly due to their sizes. Sling ball diameters are generally more than double the sizes of terracotta balls.

Type: Terracotta Tablets

Two broken clay tablets (PL. VIC) of discoidal circular and rectangular shapes have been recovered from the excavations at Lal Qila. Their purpose is unknown. According to Gaur (1995: 166) these tablets might have been used for serving ritual purpose. The circular tablet has a diameter of 4 cm and the rectangular shaped tablet measures 5 x 2.5cm.

An object recovered from Daulatpur may be a terracotta cake (PL. VID) or a terracotta tablet. It is in grey fabric, perhaps due to reduction in firing process. Both the surfaces are different: one is smooth and the other is rough. It is trapezium shaped with lengths, breath and thickness as 5.6 cm 3.8 cm, 5.2 cm and 1.9 cm respectively. Very few pieces of terracotta cakes have been recovered from Mitathal IIB (Suraj Bhan 1975: 66). These cakes generally have round corners and occur in various sizes. These are of medium fabric mixed with chaff as degraissant and are coarsely manufactured. But the Mitathal report does not illustrate

terracotta. Terracotta clay tablets or terracotta cakes are also absent from the Bhagwanpura report. These cakes might have been used as a support base for objects in the kiln.

Type: Gamesmen

Two terracotta gamesmen (PL. VIE) have been recovered from Lal Qila. Both the specimens differ in shape. One of the specimens is conical shaped with a flat base with top portion broken. It is grayish in colour with a height of 5.1 cm. Another specimen is cylindrical in shape with flat ends and is completely damaged. The height of the remaining part is 4 cm, both specimens are ill-baked (Gaur 1995: 166-67). Gamesmen may have been used for indoor games. Neither of the OCP sites of Atranjikhera and Daulatpur yielded gamesmen. From Mitathal IIB and Bhagwanpura IA also no gamesmen were recovered.

Type: Crucible

Lal Qila excavation yielded two fragments of crucibles. One of the specimens is cylindrical shaped with raised sides and has a saggar base. Due to its thickness, it may have been able to withstand excessive heat required to melt metals. Another crucible which has a flat base could also have borne excessive heat. As the 'crucibles' were fragmentary, it was not possible to measure them (Gaur 1995: 167). Crucibles have not been recovered from Atranjikhera and Daulatpur excavation. However, according to Gaur (1983: 71) slag of metal along with fragment of crucibles has been unearthed from Atranjikhera. Crucibles or its fragments have not been recovered from Mitathal IIB or Bhagwanpura IA.

Type: Terracotta Dabber

Terracotta dabbers are used to make vessels. A specimen has been recovered from Atranjikhera which is fine and well-slipped but with a portion of its edges broken. This specimen appears to be rounded at the base and tapered at the top. Its height is 7.7 cm and diameter is 11 cm (Gaur 1983: 69). Dabbers have not been reported from OCP sites or any sites such as Mitathal IIB and Bhagwanpura IA.

Type: Ear-stud

Lal Qila excavation has yielded a reel-shaped or 'damaru' shaped ear-stud (PL. VIIA). This object has pin-holes on either side and so was most probably used as an ear stud. It appears as an ochreous coloured object (Gaur 1995: 166). Ear stud as specimens are absent from Atranjikhera, Daulatpur, Mitathal IIB and Bagwanpura IA.

STONE ARTEFACTS:

Type: Quern

From Lal Qila, a total number of twenty-nine querns were reported and some of them resemble the single specimen from Atranjikhera. These are circular in shape and are made of brownish sandstone and orthoquartzite. The querns have saggar bases and thin rims. Their diameter is rouhly 30 cm and thickness ranges from 2.5 cm to 3.5 cm (Gaur 1995: 174). Atranjikhera shows stone fragments circular in shape with dressed saggar bases. These have either round or pointed edges and are made of brownish, red sandstone and grey quartzite. Querns from

Atranjikhera are too fragmentary to get diameter measurements but the thicknesses vary from 1.5 cm to 3.5 cm (Gaur 1983: 68).

Daulatpur has also yielded fragmentary querns (PL. VIIIA,A1). Like Atranjikhera, these querns are also too fragmentary (PL. VIIIC) to take full measurements. These are made of sandstone. Querns have not been reported from Bhagwanpura IA. However, Mitathal IIA has reported around fifteen querns which are generally made of sandstone.Suraj Bhan (1975: 62).

Type: Miniature Quern

Lal Qila excavation has also yielded an unusual type which is miniature querns (PL. VIIID). These miniature querns are made of sandstone and their thickness ranges from 2 cm to 3 cm. These are roughly circular-shaped with smooth working surface, but are slightly damaged (Gaur 1995:174). Miniature querns are absent from Atranjikhera and Daulatpur and also from other sites such as Bhagwanpura IA and Mitathal IIB.

Type: Pestle

During the course of Lal Qila excavation, a total number of twenty-three pestles were recovered. Some of them are well-finished with both the ends having smooth working surfaces. These are oval in section. Other kind of pestles are broken with semi-circular working surfaces and some others are irregularly shaped. These pestles are made of brownish sandstone, orthoquartzite, grayish sandstone etc. Their length, breath, and thickness ranges from 14 cm to 16 cm, 7 cm to 9 cm, 4 cm to 5 cm respectively (Gaur 1995: 171).

While pestle fragments have been recovered from Atranjikhera, in material i.e. sandstone and orthoquartzite, they resemble specimens from lal Qila. Both sites show pestles with oval section. Daulatpur yielded two comlpete pestles (PL. VIIIB,B1) made of sandstone with an oval. It measures 15 x 7.9 cm and other fragmentary pestles were also recovered made of sand stone and orthoquartzite.

Mitathal IIB period has yielded a total number of ten pestles. Broken pieces of pestles might have been used as rubber stones. The rubber stones of Mitathal IIB are generally elongated and well made (Suraj Bhan 1975: 62). From Bhagwanpura IA also pestles have been recovered.

Type: Miniature Pestles

Miniature pestles, like miniature querns, have only been recovered from Lal Qila. These are smooth and have chiselled surfaces and dressed sides. These are made of brownish sandstone and orthoquartzite. One of the damaged miniature pestles has a size of 5.8 x 4.2 cm (Gaur 1995: 173). Such miniature objects have not been recovered from Atranjikhera and Daulatpur. They are also not been reported from Mitathal IIB and Bhagwanpura IA.

Type: Grinder or Muller

Lal Qila excavation yielded a total number of sixteen grinders out of which all are broken except for four specimens. These grinders are made of red sand stone, orthoquartzite and quartzite. Most of the grinders are irregular shaped, while some of them are domical and flat-shaped. Either one or both the surfaces are smoothed. Their thickness ranges in between 2.3 cm to 5.3 cm (Gaur 1995: 173).

Grinders are absent from Atranjikhera. But one indeterminate object of sandstone with smooth surfaces at both the ends has been recovered from Atranjikhera, which might be a quern or grinder (Gaur 1983: 69).

Two stone grinders have been recovered from Daulatpur (PL. IXA,A1). Both the specimens are circular shaped and domical shaped at one end with the other end flat for crushing grains or herbs. Grinders from Daulatpur are made of sandstone. Their diameters are 8.2 cm and 7.9 cm respectively. Objects like grinders or muller, pestles and quern are all made to crush some hard objects. Differences among the objects are due to their sizes and working function. Grinders are somewhat domical, plano-convex or barrel-shaped with the top portion to be held by hand and flat ends for crushing. Pestles in contrast are cylindrical and oval-shaped, in which length is always twice or more than that of the width. These are also used for grinding or crushing .Querns has broad circular or rectangular bases, which are smooth. Grinders are not reported from Bhagwanpura IA and Mitathal IIB.

Type: Beads

During the course of Lal Qila excavation, four stone beads (PL. IXC) were found. These stone beads are of different shapes like convex circular truncated, biconical circular, short-biconical circular. These beads are made of shale and carnelian (Gaur 1995: 171). Stone beads have not been recovered from Atranjikhera and Daulatpur. From Bhagwanpura IA was found one bead of agate

(Joshi 1993: 117). Two carnelian and three agate beads were found from Mitathal IIB, one of which was long barrel circular in shape (Suraj Bhan 1975: 70).

Type: Sharpener or Hone

Lal Qila excavation yielded a total number of four sharpeners (PL. IXB) which are made of brownish and red sandstone and blackish orthoquartzite. These are rectangular, circular and trapezium shaped with flat bases. The upper or actual working surface is smooth and has a slight curve. These sharpeners might have been used for sharpening copper artifacts, copper celts, and other metal implements. One of the sharpeners is rectangular shaped, 11.5 cm x 9.5 cm x 3.5cm. Other circular shaped sharpeners have diameters of 9 cm roughly (Gaur 1995:174-75). Other OCP sites like Atranjikhera and Daulatpur have not yielded any sharpners. Sharpeners have not been reported from Mitathal IIB and Bhagwanpura IA. These sharpeners or hones may have been used by potters, especially when the vessels are thrown on the potter's wheel to even out or smooth the inner or outer surfaces.

Type: Skin Rubber

A skin rubber (PL. XB) made of orthoquartzite has been excavated from Lal Qila, which is rectangular in shape with the body surface rough and dressed sides. Its length is 7.6 cm and thickness 6 cm (Gaur 1995:175). This specimen may have been used for scraping the skin. Such type of specimens has not been recovered from Atranjikhera and Daulatpur. Mitathal IIB period reported rubber stones instead of skin rubber. These rubber stones are the re-used items made from

broken quern pieces. A few rounded pebbles may have also been used for making rubber stones in Mitathal IIB (Suraj Bhan 1975: 62). A terracotta skin rubber has been reported from Bhagwanpura IA (Joshi 1993: 130).

Type: Net Sinker

Lal Qila excavation yielded a possible net-sinker (PL. IXD). It is made of blackish ortho-quartzite. Its length is 2,6 cm and in shape looks like a pendant (Gaur 1995:62). This specimen may have been used by fishermen to trap fish by attaching the object to the net. No such object has been found at other sites discussed in this chapter.

Type: Sling Ball

Two sling balls made of spherical quartzite stone have been recovered from Lal Qila excavation. One of the spherical balls has a diameter 5 cm (Gaur 1995: 175). Daulatpur yielded one stone ball (PL. XA) made of sand stone. Its surface is rough and diameter is 3.3 cm. Eight stone balls have been recovered from period IIB of Mitathal; these balls are in bigger in size. Two of the balls are measured with diameter 6 cm and 4.3 cm respectively such object are absent from Atranjikhera Spherical globular stone balls have been recovered from Bhagwanpura IA.

Type: Weight

No weights have been found from Atranjikhera or Lal Qila. However, Daulatpur yielded three weights (PL. XC,C1) of sand stone and orthoquartzite. Two of the weights are in round form, with diameters of 5.7 cm and 6.6 cm

respectively. The other one is in triangular shaped and its size is 4 x 3.8 x 4.5 cm. Mitathal IIB period yielded six weights made of different materials. Two of them are made of sandstone, two of quartzite pebbles. One another weight is irregular shaped and made of grey granite pebble (Suraj Bhan 1975: 59). Bhagwanpura has not yielded any weight.

BONE ARTEFACTS:

A total number of seventeen bone artifacts (PL. XIA) have been recovered from Lal Qila. The repertoire of bone artifacts comprised of six arrow heads, four styli and seven points. Some are complete and some broken. Objects made of bone are not reported from other sites discussed in this chapter.

Type: Arrowhead

From Lal Qila six bone arrow heads with varying cross-section like circular, oval, flattish, and elliptical have been found from Lal Qila (Gaur 1995: 176-177). The physical appearance of some of the arrow heads are brownish, smooth and lustrous suggesting extensive use. Not a single arrow head has been recovered in a complete form: some of them having tang missing, broken point, lower portion broken or are partially damaged. Their length ranges from 3.2 cm to 5.8 cm (Gaur 1995:176).

Type: Stylii

A total number of four styli have been recovered from Lal Qila. These have the same cross-sections as the bone arrowheads i.e. oval, circular, elliptical etc. These are also brownish or black in colour. Some of them are tapered at one end

or at both the ends to make a sharp point. These styli are also partially broken or some have both ends broken. These styli are slightly larger than the bone arrow heads with length ranging from 9 cm to 14cm (Gaur 1995: 177-78).

Type: Point

Lal Qila yielded a total number of seven points. These points have circular, oval, and elliptical sections. They vary in colour from light brown to dark brown and some of them are smoothened with use. These are partially damaged with one or both the ends broken. Their length ranges from 3 cm to 10 cm (Gaur 1995: 177-78).

COPPER ARTEFACTS:

A total number of five copper artifacts have been recovered from Lal Qila. These consist of two pendants, a bead, one arrow head and a broken celt. Copper objects are absent from Atranjikhera and Daulatpur. Lal Qila yielded two pendants made of thin flat copper sheets. One measures 1.4 x 0.9 cm. The other pendant appears as balloon-shaped with a slender upper portion and a larger lower portion. Its length measures 3.4 cm and width 1.5 cm (Gaur 1995: 180-81).

Type: Bead

Lal Qila yielded a single bead made of copper. Its shape is irregular with a truncated end. It is probably made of a cylindrical coiled copper sheet. Its diameter measures 0.8 cm and thickness 1.8 cm.

Type: Arrowhead

One copper arrowhead has been recovered from Lal Qila. It seems to have triangular in shape with a length of 2.9 cm and width of 1.9cm (Gaur 1995: 180).

Type: Celt

From Lal Qila one incomplete copper celt was found in incomPL.ete with upper the portion broken. Its length measures 3.8 cm and width 4 cm. From Mitathal IIB, a total number of seven copper objects have been reported in which three of them are fragments and indeterminate in shape. The remaining four are in better preserved condition. The last four comprised of a copper ring with circular section, a 'parasu' with a thin blade, a celt with rectangular section and a mild convex cutting edge, and a copper bangle with elliptical section. Among these artifacts from Mitathal IIB period, the ring and celt show affinities with those of the copper hoards imPL.ements from the Ganga-Yamuna doab. The 'parasu' from Mitathal IIB also shows some resemblance to the one found from Khurdi in Nagaur District of Rajasthan. The celt of Lal Qila resembles the Mitathal IIB celt (Suraj Bhan 1975: 62-63).

FAIENCE ARTEFACTS:

Large number of bangles has been recovered from Mitathal IIB, in which 137 are made of faience. Their shapes comprised of mostly plano-convex section and other are oblate, circular and heart shaped etc. These bangles are invariably decorated with varieties of incised designs such as obligue lines, horizontal lines superimposed by zig-zag lines, chevron design enclosed by horizontal lines etc.

(Suraj Bhan 1975: 77, 79). Nine beads made of faience were recovered from Mitathal IIB. These are long barrel circular shaped, oblate circular shaped (Suraj Bhan 1975: 75). From Bhagwanpura IA around twenty bangles and four beads of faience reported.

IVORY ARTEFACTS:

From Mitathal II B period a fragmentary ivory pin was recovered (Suraj Bhan 1975: 79). Ivory as a material is absent from other sites.

SHELL ARTEFACTS:

From Mitathal IIB Period two shell bangles were recovered these are too fragmentary to illustrated (Suraj Bhan 1975: 77). Shell as a material again absent from rest of the sites.

PASTE ARTEFACTS:

From Mitathal IIB Period three paste beads were recovered, bead made of this raw material is absent from rest of the compared sites.

On the basis of the above descriptive analysis of artifacts recovered from OCP sites like Lal Qila, Atranjikhera, and Daulatpur from the Ganga-Yamuna doab and also from other culture sites like Mitathal IIB and Bhagwanpura IA, certain conclusions have been drawn.

1.Although R.C Gaur categorized the 'OCP culture' of the Ganga-Yamuna doab into three categories- genuine OCP sites, Harappan sites with OCP influences and OCP sites with Harappan influences, he put Lal Qila, Atranjikhera and Daulatpur in the first category. While comparing the OCP sites in term of their

assemblages, Lal Qila artefacts were made of four materials i.e. stone, terracotta, bone, and copper while Atranjikhera and Daulatpura were devoid of artefacts made of bone and copper. Atranjikhera and Daulatpur may not have had access to copper, it is hardly possible that bone was not available. Were the inhabitants of Atranjikhera and Daulatpur unaware of the technologies to make artifacts out of copper and bone? Further on what basis did the author categorize the sites Lal Qila, Atranjikhera, and Daulatpur as genuine OCP sites? Was it only based on the ceramic likeness and fabric or other artifacts as well?

2. While comparing the numbers of artifacts found from sites one should keep in mind the amount of area excavated. It is quite clear that a larger area excavated would certainly produce a greater number of artifacts and vice-versa. The approximate area excavated at Lal Qila and Atranjikhera are 632 sq m and 300 sq m respectively. Can this explain the quantitatively a larger number of artefacts recovered from lal Qila as compared to Atranjikhera?

3. To identify a culture or establish an affiliation between one culture and another, one should look at the entire material assemblage including pottery. All too often, the OCP has rested on the study and analysis of only ceramics. The analysis of artefacts from OCP sites has revealed interesting differences.

4. Bangles and beads of terracotta are some of the most common ornaments found. Lal Qila not only yielded terracotta bangles and beads but also some of semi-precious stones. Unfortunately, neither terracotta nor stone bangles and beads have has been reported from Atranjikhera. In contrast, five to six terracotta

beads have been recovered from Daulatpur, even while the excavated area of Daulatpur is a smaller than that of Atranjikhera.

5. Limited beads made of carnelian and shale were recovered from Lal Qila. This may suggest contact with other areas which had resource to these materials.

6. A single potter's terracotta dabber has been recovered from Atranjikhera. It is absent from other OCP sites. It is an indicator of pottery production. As far as other crafts are concerned, crucible fragments have been found from Atranjikhera and Lal Qila.

7. Miniature querns and pestles were only recovered from Lal Qila. These specimens are intact and are not in less number. Certainly these may have had some special function, perhaps for medical purposes.

8. Faience as a material is entirely absent from OCP sites. In contrast Late Harappan levels at Mitathal yielded for more faience bangles than tereracotta. As far as beads are concerned, nine faience beads and three paste beads were found out of a total thirty-four from Mitathal IIB. Similarly, at Bhagwanpura too, faience bangles out number those of terracotta, with twenty faience bangles found out of a total twenty-four. And four beads out of twenty-five were made of faience at this site. The link between the Harappan and the Late Harappan at these sites clearly seen through the presence of faience being used as a raw material to make ornaments.

9. A fragmentary ivory pin found from Mitathal IIB also indicates the continuation of Late Harappan levels at the site from preceding IIA. Such a material is absent at

OCP sites. Similarly the two shell bangles found from Mitathal IIB may represent 'souvenirs' from the preceding Harappan period.

10. Some of the scholars tend to associate typical copper hoard imPL.ements of Western U.P with the OCP but except for the site of Saipai, nowhere have copper hoard imPL.ements and OCP been found from the same stratum. Some of the prominent OCP sites so far could not able to show a conspicuous affinity between the OCP sherds and the copper hoard implements. Gaur (1983: 71) mentioned a terracotta crucible with copper granules, probably for smelting purpose at Atranjikhera. Undoubtedly, it shows some sort of smelting activities but oddly not a single item of copper was recovered from the site. On the other hand, Lal Qila excavation yielded five copper objects but none of the copper specimens has any affinity with the typical copper hoard implements of western U.P. Likewise Mitathal IIB reported seven copper objects in which three of them are fragmentary and indeterminate in shape; out of the rest two ring and celt show, affinities with the copper hoards of Ganga-Yamuna doab (SurajBhan 1975: 62).

11. Good evidence of hunting related activities is shown by the people of Lal Qila through their copper and bone implements like points, arrowheads, points, celt etc. Thus, in the absence of such evidence from Atranjikhera and Daulatpur, we may say people might have not been practicing hunting related activities. Yet, Daulatpur in Bulandshahr District has been considered to be a camp site of the OCP people. However, excavated area of Daulatpur shows a variety of artefacts of which have not been found from the habitation of Atranjikhera, like animal

figurines, grinders, terracotta cakes, sling balls, and weights. Thus, even while the area excavated at Atranjikhera was larger then at Daulatpur, there are categories of artefacts not found at the former site. For a 'camp site', it is then surprising that Daulatpur should have revealed artefact like animal figurines or a weight.

12. As far as copper working or OCP sites is concerned, only if metallographic studies of OCP metal artifacts are done can one know whether these belonged to a different metalworking tradition or not. Agrawal (1971: 234) on analysis of Copper Hoard artefacts had found an absence of alloying. It would be useful if the metal artifacts from Lal Qila could be analysed.

TABLE 1: A COMPARISON OF ARTIFACTS OF DIFFERENT MATERIALS FROM OCP SITES AND LATE HARAPPAN SITES

S. No	Type of object	Lal Qila	Aranjikh-era	Daulatp-ur	Mitathal II-B	Bhagwanpura IA
Ornaments (T.C)						
1	Bangles (T.C)	27	X	X	Few	3
	Bangles (Faience)	X	X	X	137	17
	Bangles (Shell)	X	X	X	02	X
2	Ear-stud	01	X	X	X	X
3	Beads	25	X	05	17	20
Figurines (T.C)						
1	Anthropomor-phs	02	X	X	X	03
2	Male figurine	X	X	X	X	X
3	Female figurine	02	X	X	X	X
4	Animal figurine	04	X	02	04	Few
5	Bird figurine	02	X	X	X	X
House hold objects						
	Toys (T.C)					
1	Wheels (Total)	14	X	02	20	03
	a) Plain	12	X	01	X	X
	b) Decorat-ed	02	X	01	X	X
	c) With	X	X	X	20	03

2	Balls (Total)	18	X	02	01	07
	a) Plain	14	X	02	01	07
	b) Decorat-ed	04	X	X	X	X
3	Gamesmen	02	X	X	X	X
4	Pottery Disc (Total)	12	02	05	01	X
	a) Decorat-ed	X	X	X	01	X
	b) Perforat-ed	X	02	X	X	X
	c) Unperfo-rated	12	X	05	X	X
Miscellaneous (T.C)						
1	Tablets	02	X	01	Few	X
2	Crucibles	02	01	X	X	X
3	Stamp	01	X	X	X	X
4	Bead or Pendent	X	01	X	X	X
Ornaments (Stone)						
1	Beads (Total)	04	X	X	17	05
	a)Carnelian	03	X	X	02	X
	b) Shale	01	X	X	X	X
	c)Agate	X	X	X	03	01

	d)Paste	X	X	X	03	X
	e)Faience	X	X	X	09	04
House hold object (stone)						
1	Pestle	23	05	01	10	X
2	Grinder	16	X	02	X	X
3	Quern	29	07	Fragment	15	X
4	Miniature Quern	03	X	X	X	X
5	Sharpner	04	X	X	X	X
6	Skin rubber	01	X	X	Few	01 (T.C)
7	Net-sinker	01	X	X	X	X
8	Pebble	03	X	X		
9	Weight	X	X	03	06	X
10	Sling ball	02	X	01	08	Few
11	Miniature Pestle	01	X	X	X	X
	Indeterminate Stone	27	01	x		
Bone Object						
1	Arrow heads	06	X	X	X	X
2	Stylus	04	X	X	X	X
3	Point	07	X	X	X	X
Copper objects						
1	Pendant	02	X	X	X	X

2	Bead	01	X	X	X	X
3	Bangle	X	X	X	01	X
Household Object. (Implements and Miscellaneous objects)						
1	Arrowhead	01	X	X	X	X
2	Celt	01	X	X	01	X
3	Ring	X	X	X	01	X
4	Parasu	X	X	X	01	X

CONCLUSION

It was earlier conceded that OCP as a ceramic types based on the nature of the ceramic's physical appearance i.e. rolled, fragile and ochreous with worn out edges. Before the extensive excavations at Lal Qila, it was believed that this group of pottery, wherever found, was usually fragile, ochreous and peeled off while handling or touching. However, excavations at Lal Qila suggested otherwise, for not only was fine-slipped, well-levigated, well-fired and sturdy pottery recovered but some of the pottery was painted too.

What is clear about OCP is that it usually occurs from the lowermost levels at sites, this suggesting the initiation of settlement in the Ganga-Yamuna Doab and adjacent areas. The controversy regarding the affiliation of OCP with other ceramic bodies as well as its identity has been traversed in Chapter I. Scholars have propounded different theories regarding its identity. Ghosh (1964) associated this culture with the Late-Harappans on the basis of similarity with some pottery types and forms of the Late Harappan. B.B.Lal (1971 cf. V.D.Misra: 353) tried to associate this culture with indigenous people that were probably the successors of Sabaras and Nisadas of the Vedic age. Other scholars like R.C. Gaur and M.D.N. Sahi affiliated this culture with the Pre-Harappans. Gaur and Sahi based their theories on the nature of fabric and decorative motives such as painted and incised designs. For example, the bull figure depicted on one of the vases as well as other painted designs such as fore limbs of goat, snake and various incised designs to

them appeared to be influenced by Pre- Harappans. On the other hand, scholars like Y.D. Sharma and K.N. Sinha suggested it may be better to mention the name of the site after the term OCP and thus use labels such as ocp (Atranjikhera), ocp (Bahadarabad). M.N. Deshpande was of the same view that the existing term OCP should not be changed but the site name should be added when a particular region was being referred to.

For many early sites, pottery plays a pivotal role in attributing affiliation to a particular archaeological culture. Following David Clark, the intention in this dissertation was to study ceramics as well as artefacts that comprise entire site assemblages to understand the material culture of the sites under study. Thus, for sites to belong to a single archaeological culture, it would be necessary for their assemblages to reveal a degree of conformity as far as their artifact-types were concerned. In chapter III, OCP pottery from Lal Qila and Atranjikhera were compared. Both these sites were ideal for analysis: they were investigated by the same excavator, R.C. Gaur who would presumably have employed a uniform ceramic classification; second, both are OCP sites in western Uttar Pradesh; and third, detailed excavation reports exist for both the sites. The intention behind the ceramic comparison was to ascertain the degree of similarity or dissimilarity between the sites and to assess whether they are illustrative of a single archaeological culture.

While doing the comparison between the two sites, it was found that the majority of bowls differ slightly in form, and paintings were not found on

specimens from Atranjikhera bowl. Certain basin forms were similar with other dissimilarities. Jars showed similarities but again the ones from Atranjikhera were not painted. Varying forms of lids were found from Lal Qila with only some of forms being similar to Atranjikhera. Some vases types were similar between the two sites while majority were dissimilar in terms of paintings and handles found from the vases of Lal Qila which were absent in Atranjikhera. Miniature pots from Atranjikhera had no paintings as Lal Qila. Ritualistic pots and dishes at Atranjikhera were absent. Dish-on stands from Lal Qila and Atranjikhera were entirely dissimilar to each other. Lal Qila showed varieties of painted designs in which some were simple and other were more complicated whereas painted designs at Atranjikhera were very few and simple. Some incised designs did match between the two sites. Grafftti at Atranjikhera was absent. Thus, on the typological comparison did suggest that there were significant differences between the two sites.

The exercise of comparing the ceramics from Lal Qila and Atranjikhera with Late Harappan sites such as Bhagwanpura IA and Mitathal IIB was to investigate the suggestions made of the affiliation between OCP and the Late Harappan. The comparison showed that Bhagwanpura IA jars did not resemble forms from Atranjikhera while two or three jar forms matched with Lal Qila. However, the majority show differences. Miniature pots were present in Bhagwanpura IA, Atranjikhera and Lal Qila but none resemble each other. Basins of Bhagwanpura IA were totally different from Atranjikhera specimens while two

of the Lal Qila basins matched with Bhagwanpura IA. A single dish from Lal Qila matched out of the numerous dishes recovered from Bhagwanpura IA while Atranjikhera was devoid of any dish. The Bhagwanpura IA report showed lids along with prominent knob which did not match with any from both the OCP sites. Vase was a common type recovered from Bhagwanpura IA and other OCP sites but while there was no resemblance with Atranjikhera forms, two vases from Lal Qila show some similarity. Troughs and handles were absent from the site of Bhagwanpura while cup-on-stand and bowl-cum-lid were absent from OCP sites. Thus, the analysis suggests that affiliation could not be established between Late Harappan Bhagwanpura IA and these sites.

Similarly, the pottery of Mitathal IIB (also Late Harappan) was compared with the OCP sites. From Mitathal IIB were reported a limited number of jars and only a beaded rim shape matched with both Lal Qila and Atranjikhera. Majority of the shapes from Mitathal IIB and OCP sites showed dissmilarity. Mitathal IIB and OCP sites illustrate numerous vase forms, some showing resemblance. Lota shaped vase and goblets from Mitathal IIB remained unique forms. As far as basins and dishes were concerned, a single basin shape of Lal Qila matched with the Mitathal IIB while Atranjikhera's forms did not match. Dish as a type is entirely absent from Atranjikhera and those recovered from Lal Qila did not match with Mitathal IIB. Only one or two bowls between Mitathal IIB and OCP sites (Lal Qila & Atranjikhera) showed resemblance, where a majority of the bowls did not match. Mitathal IIB bowls had painted design in black broad band. Dish-on-

stands and lids as types were present in the sites under analysis but none of the shapes showed resemblance. Miniature pots and troughs were not found from Mitathal IIB. While comparing the decorative designs between the sites, very few incised designs matched between Mitathal IIB and the OCP sites, with the majority showing dissimilarity. Painted designs from the OCP sites did not match with those from Mitathal IIB. Graffitti marks were absent from Mitathal IIB. Thus, from this investigation we conclude that the OCP sites and Mitathal IIB have more differences than concordances. I have also compared pottery of OCP sites with Sothi, a Pre-Harappan site to check if any affiliation could be traced between them. In order to do a comparison between OCP and Sothi, bowls as a type from Sothi were taken as a case study. The comparison between the sites showed that a few bowl types seemed to match but the majority showed dissimilarity. The study also found some different designs and forms like ridge found on the body of one of the Sothi's bowl and ring bases were common to Sothi and also painted designs on the bowl's surface.

Apart from pottery, other artifacts are important as the whole comprise a site's archaeological assemblage. It was necessary to study entire site assemblages, as Clark had pointed out that in order to discuss an archaeological culture, artifact-types should reflect most spheres of human activity. Thus, if we only studied the ceramics, other bodies of materials and artifacts would be left unanalyzed which would give us an important insight into past human societies. Thus, the artifacts were compared between the two OCP sites under study, Lal Qila and Atranjikhera

as well as with Late Harappan Mitathal IIB and Bhagwanpura IA. A comparison showed that Bhagwanpura IA artefacts were largely made of only three materials. From Mitathal IIB artifacts were made out of raw materials such as terracotta, stone, copper, paste, faience, shell and ivory.

Terracotta anthropomorphs were illustrated only from Lal Qila and Bhagwanpura but are dissimilar forms. Animal figurines were recovered from all the mentioned sites except Atranjikhera but the forms showed no similarity.

Among the terracotta artefacts gamesmen, ear-stud, stamp and terracotta dabber need to be mentioned, because the first three artifacts were unique to Lal Qila. The last artefact, terracotta dabber, has only been recovered from Atranjikhera. Bangles and beads were recovered from Bhagwanpura IA and Mitathal IIB, not only made of terracotta but also of faience. Faience is completely absent from the OCP sites.

Quern, weight, pestle, grinder, skin rubber, net-sinker, sling ball, miniature pestle and quern, were recovered from Lal Qila. Atranjikhera illustrated only pestle grinder whereas from Daulatpur pestle, grinder, quern, weight and sling ball were recovered. A weight was an unusual find from Daulatpur. Mitathal IIB yielded pestle, quern, skin rubber, weight and sling ball whereas, Bhagwanpura IA yielded only a sling ball.

Bone artifacts like arrowheads, stylii and points have only been reported from Lal Qila. Like bone artifacts copper artifacts were recovered from Lal Qila which included pendants, beads, arrowheads and celt. This broken celt matched

with the celt of Mitathal IIB. Besides this specimen Mitathal IIB reported object similar to Copper Hoards implements.

Unlike the continued use of stone and terracotta in Mitathal IIB both of which are local materials, the find of ivory from Mitathal IIB could well be a remnant from IIA occupations a 'sonvenir' in later periods.

In contrast, the occurrence of faience in Late Harappan sites such as Mitathal IIB and Bhagwanpur IA is more significant as it demonstrates the like between the Mature Harappan and the Late Harappan. Faience is a completely manufactured artificial material, the technology of which was manufactured by Harappans. The absence of faience from the OCP sites such as Lal Qila and Atranjikhera is surely significant as this clearly shows a lack of affinity between OCP and Late Harappan assemblages.

One must also note that most of the artifacts, whether of terracotta or stone, are not really distinctive. Most of the artifacts are of types commonly found in chalcolithic contexts. Even in the case of copper, only those types which resemble Copper Hoard type- fossils are distinctive. Thus, more than style in the case of the artefactual comparison, it was more useful to see which materials were being consumed and for what.

The cross-culture study of ceramics did show certain resemblances. We must here question whether there typological similarities reflect functional constraints.

It was also considered important to focus on the disconformities which could illustrate other traditions or influences at work. It can thus, be noted even among OCP sites there are significant disconformities. We may thus need to question the attribution of a single 'culture' such as OCP sites like Lal Qila and Atranjikhera.

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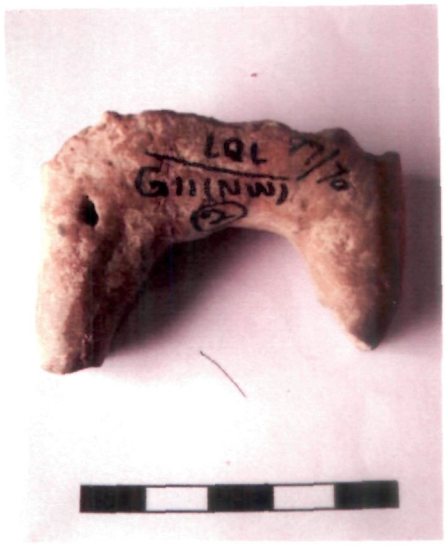
PLATE I

A



B

C

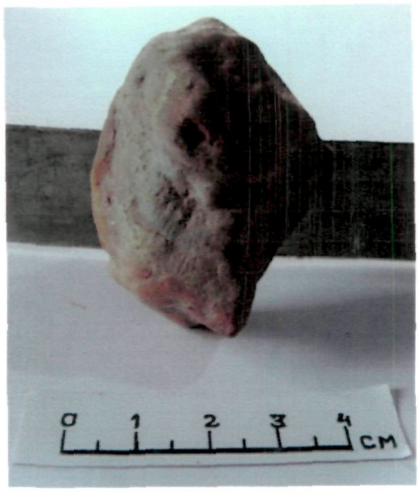
D

A: TC Anthropomorph,Lal Qila; B: TC Anthropomorph Broken, Lal Qila; C: TC Female, Lal Qila; D: TC Female Broken,Lal Qila

PLATE II

A

B



C

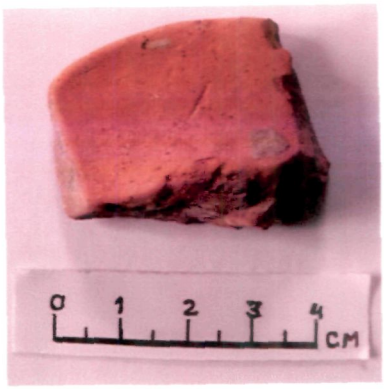
D

D(1)

A:TC Animal fig.(Broken),Lal Qila; B: TC Ram, Daulatpur; C: TC Dog, Daulatpur ; D, D (1):TC Birds (Broken), Lal Qila

PLATE III

A

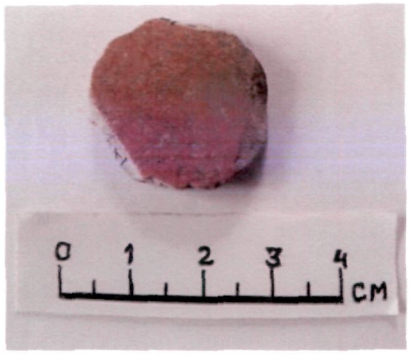


B

B(1)

B(2)

]



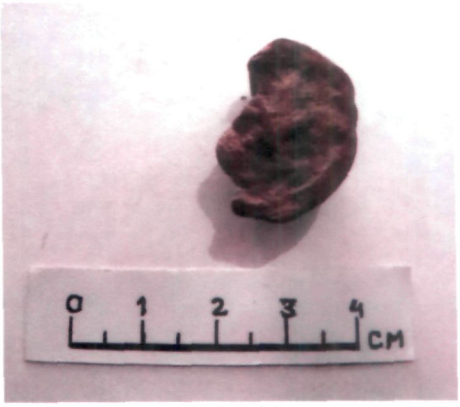
B(3)

B(4)

A: TC Sling Ball ,Lal Qila; B,B (1),B(2),B(3),B(4) TC Discs, Daulatpur

PLATE IV

A

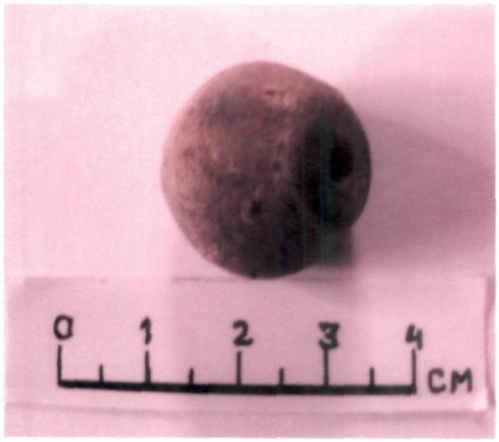


A(same)

B

B(1)

B(2)



C

A:TC Stamp, Lal Qila ;(B, B(1),B(2): TC Beads , Lal Qila; C:TC Bead, Daulatpur

PLATE V

C(1)

C(2)

D

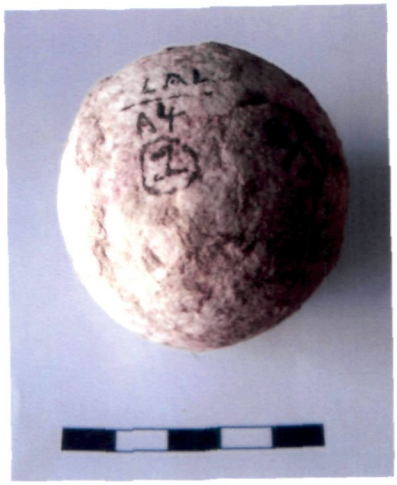
E

F

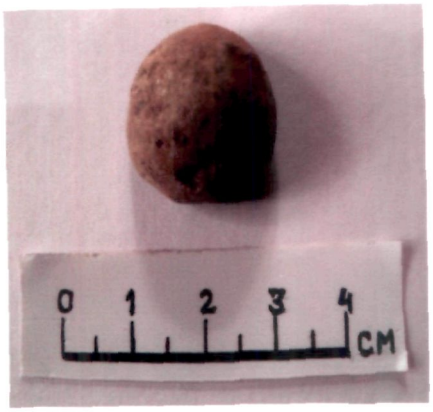
E(1)

C(1), C(2): TC Beads , Daulatpur; D: TC Wheel , Lal Qila ; E, E(1): TC Wheel , Daulatpur; F:TC Bangles Lal Q.

PLATE VI

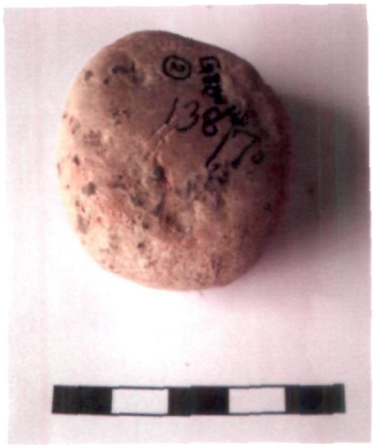


A



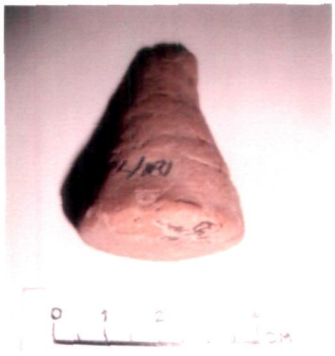
B

B(1)



C

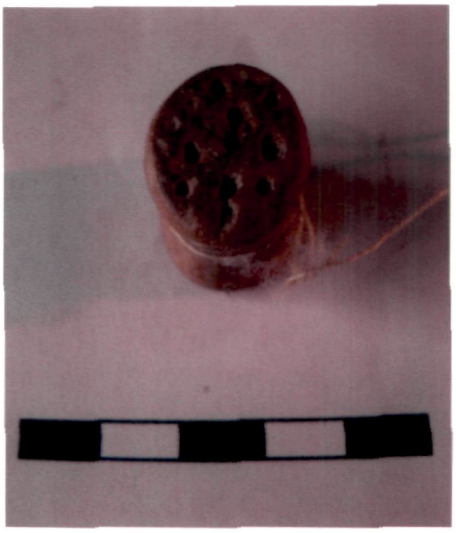
D



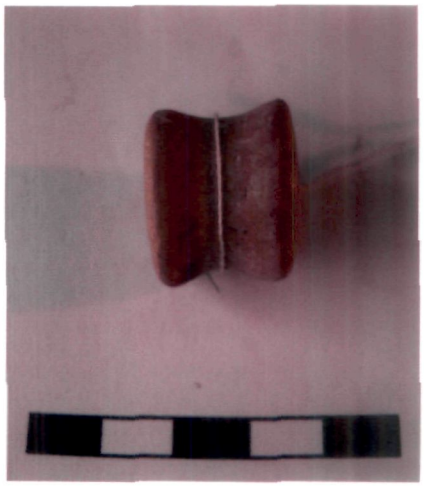
E

A:TC Ball, Lal Qila; B,B(1):TC Balls,Daulatpur; C:TC Cake,Lal Qila; D:TC Cake,Daulatpur ;E:TC Gamesmen,Lal Qila

PLATE VII



A



A(same)

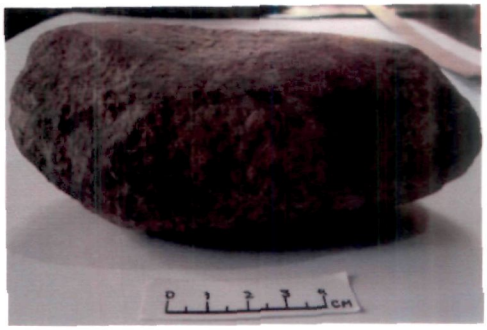
A:TC Ear-Stud, Lal Qila

PLATE VIII

A

A(1)

B



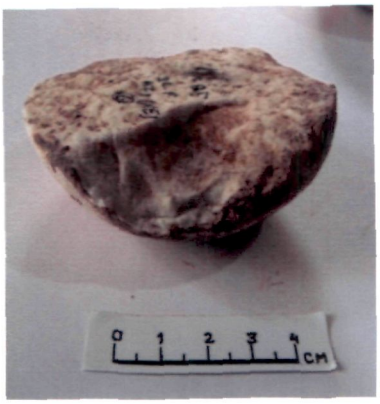
B(1)

C

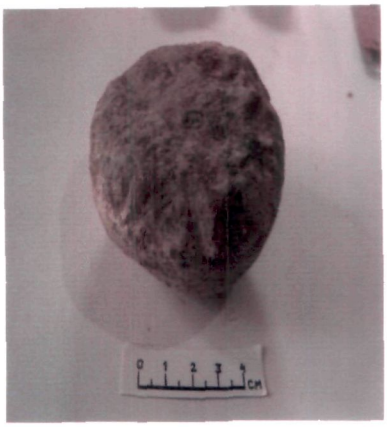
D

A,A(1):Stone Querns,Daulatpur; B,B(1):Stone Pestles,Daulatpur; C: Stone Quern Fragments,Daulatpur; D:Stone Miniature Quern, Lal Qila

PLATE IX



A



A(1)

B

C

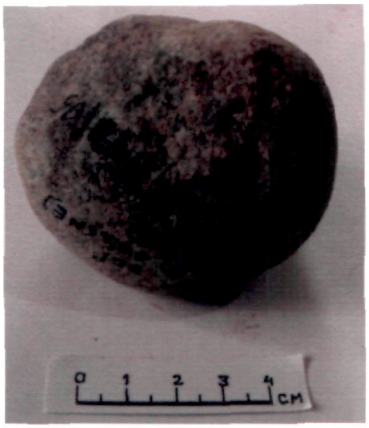
D

A,A(1):Stone Grinders, Daulatpur; B:Stone Sharpener ,Lal Qila; C: Stone Bead,Lal Qila; D:Stone Net-Sinker,Lal Qila

PLATE X

A

B



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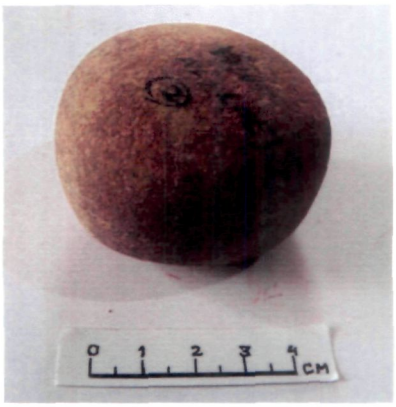

C(1)

A:Stone Ball , Daulatpur; B:Stone Skin Rubber, Lal Qila; C,C(1):Stone Weights, Daulatpur

PLATE XI

A

A:Bone Artifacts, Lal Qila